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NOTES

A Framework for the Allocation of Prevention Resources with a Specific Application to Insider Trading

Every society prohibits activities that are detrimental to its general welfare and, in order to enforce the prohibitions, designs a mechanism to deter individuals from engaging in the activities. Because such a mechanism consumes societal resources, it is in the best interests of society that this mechanism operate efficiently, as well as deter individuals effectively.

A conceptual framework can be helpful in determining the various resource combinations that will deter an activity effectively and in then choosing the one combination requiring the smallest resource expenditure. A framework will yield concrete results capable of being implemented by enforcement agencies only if it integrates the particular characteristics of both the prohibited activity and the persons who typically engage in it. Since these characteristics necessarily vary among prohibited activities, enforcement agencies need a separate, specific framework for each activity in order to ensure accurate policy decisions. Yet prohibited activities (and the various groups of typical offenders) also have features in common, and it is therefore possible to build a general framework that can be modified for more precise analyses of specific activities.

This Note enumerates and analyzes the three principal forces that induce individuals to abide by societal laws. These forces, or elements of effective prevention, are then combined to form a framework of general deterrence that both identifies the areas in which society can introduce resources into the prevention plan and explains in a general manner what the effect of particular expenditures will be. In the final section of the Note, the framework is applied to a specific prohibited activity—insider trading in securities—to exemplify its utility in determining more effective applications of prevention resources.

I. The Concept of Deterrence

The need for a mechanism that deters individuals from engaging in undesired activities arises from the failure of the private market to induce an individual to consider the full social cost of an activity in deciding whether to engage in it. This market failure is a problem basic to many social concerns. Consider an entrepreneur whose manufacturing plant spews smoke into the air. His polluting activities impose significant costs on those living in the vicinity of his plant.

Yet, because these costs do not affect him, the entrepreneur does not consider them in determining the level at which to operate his plant. Consider also the bank robber who illegitimately gains $5000 at the rather insignificant cost of a few hours time, a gun, a ski mask, and perhaps some forgone earnings from "laying low" for a while. The bank robber's activity also imposed costs on other persons—costs that he does not consider in determining the profitability of his venture. In these and similar cases, the full social cost of the activity is greater than the private cost that the individual considers in deciding whether to engage in the activity.

If individuals were induced to consider these external costs, they would perceive their activities as being less beneficial and therefore would either discontinue the activities or engage in them less frequently. If the polluter were taxed an amount equal to the external costs generated by his polluting, his marginal cost of producing each unit would increase. At this higher schedule of costs, he would supply fewer goods at any given price and a lower equilibrium output with smaller total pollution would result. Society could induce the bank robber to consider the external costs of his activity by employing a deterrence mechanism that would cause him to associate a higher cost, in terms of fear, potential loss of freedom, and possible economic loss, with engaging in the activity. If this were done the robber would discontinue his activity since the costs he would associate with engaging in the activity would presumably equal or exceed his expected benefits. In short, the process of internalizing the external costs of an activity acts to correct the market failure and to prevent the over-allocation of resources to the activity that occurs if the benefits are not juxtaposed with the full social costs.

This correction of the market failure is properly made by society rather than by any individual because prevention is a "public good"; that is, the benefits from a reduction in the level of an activity enure to all individuals, and the exclusion of any individual from receiving the benefits is impossible.[1] Indeed, the internalizing must be conducted by society since the benefits that would accrue directly to any individual would be too small to justify his personal maintenance of the systems of courts, enforcement agencies, etc., that are necessary for internalization.

Society could internalize simply by imposing upon each violator, through actual apprehension and punishment, the full social cost of his undesired activity. The violator who suffers such an internalization would be deterred from engaging in the undesired activity again because he would perceive that future activities would not be benefi-

1. *See* R. MUSGRAVE & P. MUSGRAVE, PUBLIC FINANCE IN THEORY AND PRACTICE 52-55 (1973). In fact, it is inefficient to exclude people from using pure public goods since the marginal benefit of use to each person is always greater than the marginal cost to society of his use.

cial for him. Internalization in this manner is termed specific deterrence.[2]

Specific deterrence without more, however, does not reduce the level of an activity to zero since it will not deter first offenders who are unaware of the practice of internalization.[3] Society can deter an activity completely, its objective in the case of prohibited activities, only by employing a general deterrence mechanism that convinces the individual who has yet to commit his first offense that the offense will be unprofitable. That is, society must create a *threat* of internalization, made credible by the actual apprehension and punishment of past offenders, and communicate that threat to all potential offenders.[4]

A general deterrence mechanism is based on the idea that threats of internalization are necessary to reach the societal objective of a zero level of prohibited activities. Accordingly, such a mechanism operates upon the *expectations* of potential offenders. An individual's motivation for engaging in a particular activity is his expectation of benefit, whether the benefit be economic or psychological in nature. If the individual expects no benefit, he will not engage in the activity since the activity will require positive expenditures of time and effort. The objective of general deterrence is to develop counter-motivations that will offset the individual's expected benefits from offending. Counter-motivations are expectations of costs (*e.g.*, the loss of income or freedom) that the individual will associate with society's reaction (*e.g.*, the imposition of punishment) to his violation.[5]

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2. *See* J. ANDENAES, PUNISHMENT AND DETERRENCE 84 (1974).

3. This statement assumes, of course, that an individual who is contemplating commission of his first offense is unaware that violators are punished. While unrealistic in its extreme form, this assumption is helpful in isolating the idea that general prevention plans must depend solely upon the manipulation of the perceptions and expectations of potential offenders.

4. Specific deterrence is not part of a general prevention model since it is concerned only with the deterrence of a specific individual. General prevention and specific deterrence, however, are intertwined since the threats used in general prevention are credible only when supported by some actual punishments. Actual punishments, in turn, serve as specific deterrents to the particular offenders who receive them.

5. This conception of general deterrence obviously assumes that individuals are motivated by "rational self-interest" and, accordingly, balance expected benefits and costs before acting. Many readers may be unwilling to accept this assumption; few would disagree that research is needed to determine the psychology of crime. However, some of the disagreement with this assumption may be overcome by taking a broader view of "rational self-interest." Benefits can be viewed broadly to include everything from economic benefits to psychological pleasures. Costs can be defined to include psychological costs, such as embarrassment or the frustrations of discrimination resulting from prior prohibited conduct, in addition to imprisonment terms, lost income, or fines. Finally, the weighing process can be viewed not as a process of mathematical summation but rather as a process of resolving conflicting forces—motivations and counter-motivations—that is, conducted subconsciously or con-

Counter-motivations could be developed by threatening to impose on the offender the full social costs generated by his offense. But a prevention scheme can succeed by creating expectations of costs sufficient simply to offset the offender's expected benefits. When these benefits are less than the social costs of the activity, as is often true in the case of prohibited activities, there is no reason for society to expend additional resources to create the expectation that the full social costs of an offense will be imposed. The expenditure of the additional resources would be inefficient because no social benefit, in terms of greater prevention, would be gained.

In short, the level of social costs generated by an offense is irrelevant in determining the level of costs that society should threaten to impose in order to deter most efficiently. The social cost of an offense is not totally irrelevant, however, to the development of our general deterrence framework. Society would incur a net cost if it spent more on deterring an offense than the benefit—the avoidance of the offense's social cost—that it gains from successfully preventing the offense. Thus, the social cost of an offense serves as a ceiling upon the amount of resources that society should expend to manipulate an offender's counter-motivations.

To be of aid in making resource allocation decisions, a deterrence framework must incorporate the motivations and counter-motivations operating upon a given potential offender. Ideally, a separate framework should be devised for each potential offender, but the costs of doing so are prohibitive and make it necessary to construct a framework built with a "typical" individual in mind. The typical individual in the model developed below is assumed to have but a few general characteristic. He is assumed to be risk averse,[6] motivated

sciously. *See* J. ANDENAES, *supra* note 2, at 36. Viewed in this light, the assumption that offenders act in their "rational self-interest" becomes more reasonable.

Furthermore, any model for the allocation of prevention resources must be rooted in some predictable rule of human behavior since the purpose of such a model is the determination of the most efficient methods of influencing that behavior. Of course, present inability to make detailed predictions of deterrent efficacy does not undermine the usefulness of developing and employing the best framework possible.

This Note assumes that societal prevention resources should be used efficiently; that is, that resources should be expended only if deterrence is possible at reasonable levels of cost. Because the impulsive person cannot be deterred at reasonable cost, it is irrational to expend resources in an attempt to deter him. Accordingly, impulsive behavior is not taken into consideration in constructing a workable model for efficient resource allocation. *See* Wechsler & Michael, *A Rationale of the Law of Homicide: I*, 37 COLUM. L. REV. 701 (1937). The authors admit that "[i]n some cases, at least, the irresistible character of the impulse is reasonably clear and the punitive treatment of the individuals involved is, therefore, not required in the interests of deterrence," *id.* at 757, but they conclude that the conduct of nondeterrable persons should still be criminal in order to render them amenable to incapacitative and reformative treatment, *id.* at 759.

6. Risk averseness implies that a higher probability (greater risk) of actual imposition of punishment will have a greater counter-motivating effect than a lower probability of such imposition. An individual who is risk averse should be distinguished from an individual who is risk neutral (*i.e.*, unaffected by changes in the

by self-interest,[7] and influenced at least to some degree by all the elements of general deterrence set out below. In particular applications, alterations in the framework can be made to account for the characteristics prevalent among the typical violators of the particular law.[8]

The framework developed in this Note takes into consideration the fact that two interrelated resource allocation decisions are at play in the deterrence context. One allocation decision is made by the potential offender, who must decide whether the motivations or benefits from offending exceed the counter-motivations or costs that he will incur. In attempting to deter, society tries to influence this decision by manipulating the counter-motivations associated with offending. If successful, society's intervention will negate the offender's perceived benefit from offending and will induce him to expend his resources on nonprohibited activities.[9] The other allocation decision is made by society, which must determine the kinds and amounts of resources that should be expended to induce potential offenders to engage in nonprohibited activities. Efficiency [10] is society's goal in making this second allocation decision.

The framework is presented as a mathematical formulation in order to bring into sharper perspective the various factors entering into these allocation decisions and to establish their interrelationships more clearly. The mathematical form is not meant to suggest that all

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probability of punishment) or who is risk-preferring (*i.e.*, less counter-motivated by an increase in the risk or probability of punishment). *See* F. ZIMRING & G. HAWKINS, DETERRENCE 104-06 (1973).

7. *See* note 5 *supra*. This assumption implies that an individual prefers to engage in an activity with positive net benefits rather than an activity that generates zero or negative net benefits, where net benefit represents the gap between total motivations and total counter-motivations. It might be argued that economics can say little about how an individual goes about deciding whether to violate a law or regulation, but such criticism would be inapposite. Economists do not attempt to say why a person needs two apples to equal his satisfaction from one orange. Instead, economic theory defers to other disciplines for an explanation of the nature of individual preferences and, taking a particular preference arrangement as given, explains what will occur when constraints are placed upon individual choice. So, too, economic theory expects the sociologist and psychologist to determine the reasons why the benefits from offending take various forms and have varying trade-offs for individual offenders. Economists step in to determine what will occur at the point where, in the mind of the potential offender, the costs of offending equal or exceed the benefits.

8. *See, e.g.*, text at notes 47-74 *infra*.

9. This presumes, of course, that the individual has available some other activity with positive net benefits on which to expend his resources. This assumption is necessary since, if all other activities have $\pi = 0$, the individual will be indifferent as between the prohibited activity and the alternative activity. Economic theory cannot predict a choice in this situation. Inactivity is not necessarily a preferable alternative to prohibited activity because the benefits are zero and the costs in terms of starvation or loss of self-esteem may be considerable. Typically, the assumption that an alternative activity with positive net benefits is available will be reasonable.

10. Resources are used efficiently when the marginal cost of the last unit of resources expended on a project yields an equivalent marginal benefit.

elements of deterrence can be quantified and measured, for they cannot. It is used, rather, to indicate the relationships among the elements. A sum, for example, indicates that the summed factors each contribute their full measure, independently of the other, to the prevention of the prohibited activity. A precise quantification of the factors would be profitable, but the aim of the framework is to evaluate possible deterrence policies by determining the quality and significance of the effect of such potential policy changes.[11]

II. A General Framework

This part develops a general framework for the allocation of resources to the prevention of undesired activities. Subpart A considers the three principal types of counter-motivations. Subpart B constructs a concrete model of the first resource allocation decision: the potential offender's decision whether to engage in a prohibited activity. This model is most accurately called a general prevention model, rather than a general deterrence model.[12] General prevention, broader than general deterrence, is the sum of all the legal and extra-legal forces that induce individuals to be law abiding. Subpart C completes the general framework by isolating the criteria that underlie the second allocation decision: society's decision concerning the kinds and amounts of resources to devote to the prevention of offenses.

A. *The Types of Counter-motivations*

In deciding whether to commit an offense, an individual considers both the benefits and the costs that will result from his action. Before he acts, however, he does not know exactly what the benefits and costs will be. His decision whether to offend is therefore based on expectations about the resulting benefits and costs rather than upon the actual benefits and costs themselves. In analyzing the potential offender's decision-making process, it is necessary to distinguish between the potential offender's cost expectations, or counter-motivations, and the actual costs, and to focus on the former.

Counter-motivations are of three principal types: primary general deterrence, secondary general deterrence, and socio-pedagogical influence.[13] It will become apparent as these three types are set out that the "costs," the expectation of which serve as counter-motiva-

11. *See generally* F. Zimring & G. Hawkins, *supra* note 6, at 54, 61.

12. *See* J. Andenaes, *supra* note 2, at 7.

13. These labels are only partially in keeping with standard terminology. The term "socio-pedagogical influence" is used and similarly defined by Andenaes, J. Andenaes, *supra* note 2, at 35-36, but his equivalent of "primary general deterrence" is simply "general deterrence," *id.* at 174. Andenaes does not apply a specific label to what is here defined as "secondary general deterrence," although he does recognize this element as an influence in general prevention. *See id.* at 24.

tions, cover a wide range of influences. They include the economic costs of fines, attorney fees, and forgone income while on trial or in prison, the more amorphous psychological costs of guilt, frustration, and fear, and the unpleasantness and loss of freedom resulting from imprisonment.

Primary general deterrence (D_1) refers to the counter-motivations associated with the fine, imprisonment, or other punishment officially established for violations of the particular law. The kinds of costs that individuals associate with primary general deterrent punishments cover a broad range of economic and psychological costs and vary somewhat among potential offenders for any particular punishment. The costs of being imprisoned for five years, for example, are perceived differently by different potential offenders. While more specific research concerning the magnitude of these counter-motivations is needed, it can be safely presumed that the magnitude is positively related to the level of punishment; that is, as the level of punishment increases, the preventive influence of the punishment increases.[14]

Secondary general deterrence (D_2) refers to the counter-motivations associated with the extra-legal sanctions imposed upon offenders. Upon learning of a violation, other members of society may apply their own ad hoc punishments in the form of stigmatization, the withholding of employment, or social disapproval.[15] These extra-legal punishments result directly from the individual's violation of a legal rule. Unlike the official punishment, however, they are often imposed in the absence of an official determination of the offender's guilt. Also unlike the official punishment, they are imposed by individuals rather than by society in a collective action.

The existence and extent of secondary general deterrent costs depend upon societal and sub-group norms. Other persons will apply secondary general deterrent punishments to an individual only if they believe that he merits disapproval; they must be shocked or frightened by his actions or must believe that his actions were wrong. A thief, for example, would probably be stigmatized by nonthieves but would meet with little disapproval from fellow thieves. If fellow

14. *See* J. ANDENAES, *supra* note 2, at 61; F. ZIMRING & G. HAWKINS, *supra* note 6, at 89; Kraust, Robinson & Cauthen, *Variables That Influence Ethical Risk Taking Among Convicts*, 7 PROCEEDINGS OF THE 80TH ANN. CONVENTION OF THE AM. PSYCH. ASSN. 225, 225-26 (1972).

15. *See, e.g.*, J. ANDENAES, *supra* note 2, at 24; Special Project, *The Collateral Consequences of a Criminal Conviction*, 23 VAND. L. REV. 929 (1970). Some secondary costs, such as attorney fees, are incurred by the offender rather than imposed on him.

A violation may result in secondary benefits as well as secondary costs. Thus, a youthful offender may be stigmatized by his parents—a type of secondary cost—but admired by his peers—a type of secondary benefit. In the model developed below, D_2 includes only the gross secondary costs, while the gross benefit variable, B, includes the secondary benefits.

thieves were the only persons in positions to apply these punishments, the thief would never face these secondary counter-motivations.

Since the effectiveness of secondary general deterrence depends on the strength of societal norms that accord with and support the attitude of the law, no legal agency can directly control its application.[16] Yet this deterrent influence, virtually costless to the government, can have significant effect on potential offenders.[17] Accordingly, legal agencies should make judgments about the existence and strength of secondary general deterrence and consider it in allocating prevention resources.

The third and final type of counter-motivation is socio-pedagogical influence (D_3).[18] While both primary and secondary general deterrence involve expectations of both economic and psychological costs, socio-pedagogical influences are essentially only psychological costs. These costs might be described as feelings of guilt or as desires to follow socially approved rather than disapproved courses of action.[19] They may be triggered by the commission of an offense, but they may also arise and have their greatest effect while the potential offender is deciding whether to commit the offense. For some individuals, socio-pedagogical influences are so strong that they prohibit the mere contemplation of committing an offense.

Socio-pedagogical influences result indirectly from society's teaching that certain activity is wrong, unfair, or undesirable. This teaching, expressed by the legal and extra-legal punishment of those who have in the past committed the activity, creates a societal norm that

16. Legal agencies may, however, be able to influence underlying norms. *See* text at note 22 *infra*.

17. Of course, society might decide that, in the interests of rehabilitation, secondary general deterrent influences should be discouraged for certain violators or classes of violators. For example, the benefit of prevention efficacy arising from expectations of secondary punishments might be more than offset by the costs associated with the frustration of society's goal to return offenders to society with regular employment. This frustration of rehabilitation, however, is best handled by treating it as another cost that must be considered in deciding whether a particular prevention plan minimizes the social resource cost of prevention.

18. The inclusion of socio-pedagogical influences in this model meets a criticism leveled by noneconomists against models of prevention that depend solely upon increasing the costs associated with prohibited activities. *See, e.g.*, Sullivan, *The Economics of Crime: An Introduction to the Literature*, 19 CRIME & DELINQUENCY 138, 143 (1973). These noneconomists argue that it is insufficient to increase the opportunity costs of prohibited activities without altering the individual's "tastes" or "preferences." Socio-pedagogical influences can be seen as both altering "tastes" and increasing costs.

19. Experiments by social psychologists have shown that people's judgments on such matters as moral issues, aesthetic preferences, and religious questions are influenced by what they are told is the majority view . . . . It is quite conceivable that one of the functions of the criminal law (even though it performs it unintentionally) is to inform members of a society of at least some of the moral attitudes of that society, and so to influence their own moral attitudes.

Walker, *Does the Law Affect Moral Judgments?*, 4 BR. J. CRIMIN. 570, 570 (1963). *See* J. ANDENAES, *supra* note 2, at 35 (punishments and enforcements are messages sent to teach what is wrong).

individuals, in turn, tend to follow in their desire to do what is "right." The norm may be so pervasive that the tendency to avoid the activity rises to the level of a habit.[20] Such norms are often supplemented by widely held religious beliefs or beliefs concerning responsible social conduct.[21]

Legal agencies can attempt to strengthen socio-pedagogical influences by generating or augmenting societal norms.[22] The primary method of doing so is by imposing legal punishments on those who violate the putative norm and by educating society about the social undesirability of violations. Resources spent on primary general deterrence—on imposing legal punishments—should therefore be expended with a view toward maximizing the beneficial impact on societal norms. Of course, strengthening societal norms also increases secondary general deterrence since the same set of norms serves as its basis.

B. *A Model of General Prevention*

At this point it is appropriate to develop a concrete model that shows the relationships among the various elements of general prevention and that aids in recognizing points at which society can expend resources for greater preventive efficacy. As noted above, an individual will commit an offense only if he perceives that it will result in a net benefit for him; that is, if he perceives that the benefits from offending are greater than the costs. This can be conceptualized as

$$\pi = B - C \qquad (1)$$

where

π = net benefit to be gained if the activity is carried out;
B = motivation or expected benefits;
C = counter-motivations or expected costs.

A deterrent mechanism will be effective only if it reduces π to some value less than or equal to zero; this occurs when the motivations for the activity are totally offset by the counter-motivations.

Counter-motivations C can now be replaced with the three basic types of counter motivation: primary general deterrence (D_1), secondary general deterrence (D_2), and socio-pedagogical influence (D_3):

$$\pi = B - (D_1 + D_2 + D_3) \qquad (2)$$

20. *See* J. ANDENAES, *supra* note 2, at 8; F. ZIMRING & G. HAWKINS, *supra* note 6, at 84.

21. For example, societal norms against littering have probably developed more as a result of recent social environmental concern than as a result of statutes establishing fines for littering.

22. *See generally* Arrow, *The Organization of Economic Activity: Issues Pertinent to the Choice of Market Versus Nonmarket*, in PUBLIC EXPENDITURES AND POLICY ANALYSIS 59, 70-71 (R.H. Haveman & J. Margolis eds. 1970).

The three added together total the full measure of counter-motivations since each makes an independent contribution to C.[23] As before, deterrence will exist when π is less than or equal to zero, which occurs when $(D_1 + D_2 + D_3) \geq B$. Benefit B is an exogenous variable in this model since the benefit to be gained from a violation cannot be controlled by legal agencies. Benefit is still defined broadly to cover any gains, rewards, or gratifications that an individual may receive from engaging in a prohibited activity.[24]

The next step in developing the model is to account for the fact that potential offenders, in deciding whether to offend, discount the expected costs and benefits by the probability that they will be received. When an individual compares the benefits and costs to him of engaging in a prohibited activity, he typically compares benefits with *possible* costs since from everyday observation he knows that every perpetrator is not caught and punished. Because the individual does not expect with certainty to receive the potential punishment, its counter-motivating influence upon him is lessened.[25] In attempting to quantify the counter-motivations associated with the legal and extra-legal punishments for a particular offense, it is therefore necessary to discount the punishments by the probability that they will ever be imposed.[26]

Thus, the efficacy of primary and secondary general deterrence depends not only upon the level of the punishment but upon the probability that the punishment will be imposed, which in turn depends upon the kind and amount of resources allocated for the investigation of violations and the prosecution and punishment of violators. Socio-pedagogical influences, however, need not be discounted by the probability that they will ever occur since their incidence is unrelated to whether the offender is legally punished.[27]

Benefits, like costs, cannot always be expected with absolute certainty. The variance from complete certainty is most likely to

23. These three elements are added together to achieve total counter-motivations since they are mutually exclusive as defined. In reality, it may be difficult to determine the proper category for a particular counter-motivating influence, but, so long as it is placed in only one category, the summation will be correct.

24. *See* note 5 *supra.*

25. Research evidence indicates that a greater probability of receipt of punishment will increase counter-motivation and, thus, alter choices. *See* Mischel & Grusec, *Waiting for Rewards and Punishments: Effects of Time and Probability on Choice*, 5 J. PERSONALITY & SOC. PSYCH. 24, 28 (1967).

26. Theoretically, time-preference discounting may also occur. In general, individuals prefer a dollar today rather than a dollar next week; similarly, punishment in two months or five years has less weight than immediate punishment and so is less effective in offsetting benefits that will be received presently. The rate of time-preference discounting will vary among individuals. Psychological research on this point, however, is inconclusive. *See* Grusec, *Waiting for Rewards and Punishments: Effects of Reinforcement Value on Choice*, 9 J. PERSONALITY & SOC. PSYCH. 85 (1968); Mischel & Grusec, *supra* note 25.

27. *See* text at notes 19-21 *supra.*

occur when the completion of the violation takes place some substantial period of time after the decision to proceed is made, since it is harder in such cases for the individual to gauge the plan's prospects of success. The probability of benefit will, in general, be an exogenous variable, as will be the level of benefit, since it is not controllable by legal agencies in their prevention plans and must be taken as a given. In specific cases, agencies may be able to make reasonable estimates of the probability of benefit as perceived by the potential offender.

In some cases, the probability of benefit may be influenced by the probability of detection prior to receipt of the benefit. For example, a burglar who realizes that he may be caught leaving the scene of his crime and may lose his stolen goods has a lower perceived probability of benefit than does the corporate director, unlawfully trading on inside information, who almost always receives his benefit prior to detection. In applying the model to specific cases such as burglary, an appropriate modification should be made.

The expected net benefit[28] may now be labeled π, and the relationship among the elements is

$$\pi = F_b \cdot B - [F_{pp} \cdot P + F_{ps} \cdot S + D_s] \qquad (3)$$

where:

F_b = perceived probability of benefit;
F_{pp} = perceived probability of punishment;
F_{ps} = perceived probability of secondary costs;
P = punishment;
S = secondary costs;
D_s = socio-pedagogical influences;
$[F_{pp} \cdot P]$ = primary general deterrence, (D_1);
$[F_{ps} \cdot S]$ = secondary general deterrence, (D_2);

and by definition, $0 \leqq F_b, F_{pp}, F_{ps} \leqq 1$.

The probabilities inserted into the model are the probabilities as perceived by the potential offender (the perceived probabilities). These probabilities were inserted because individuals rely upon their own perceptions in deciding whether to offend. The perceived probabilities may, of course, and usually do differ from the actual or objective probabilities since potential offenders are usually not fully apprised of the true level of resource allocation to enforcement efforts.

The difference between the perceived probabilities and the objective probabilities depends largely upon the extent to which investigations, apprehensions, and convictions—the results of prevention resource expenditures—are communicated to potential offenders. The

28. "Expected net benefit" means the expected value of net benefits and refers to a weighted average of the motivations (benefits) and counter-motivations (disbenefits) where the weights are the probability of the occurrence of each.

amount of resources expended on communicating such information (the communication factor), therefore, can materially affect the perceived probabilities. Enforcement resources could be utilized in such a way that every violator was caught and punished. But if this enforcement efficiency were never made public, potential offenders would lack a clear understanding of the risks they faced. Similarly, if successful enforcements or the employment of new enforcement techniques were only sometimes publicized, the individual would underestimate his risk. Legal agencies might cause an overestimation of risk by very carefully stressing every single enforcement. In short, the perceived probabilities upon which individuals base their decisions are functions of the communication factor and the objective probabilities. Accordingly, the variables for prevention policy are the level of communication and the objective probabilities; that is, society can alter perceived probabilities by expending more resources on communication and on the apprehension and punishment of offenders.

Communication is in several ways essential for effective prevention. An increase in primary general deterrence, for example, will be effective only if communicated to potential offenders. Communication is also necessary to support secondary general deterrence and to establish socio-pedagogical influences since, without communication, new societal norms will not be developed and existing norms will not be maintained. Furthermore, the public knowledge of a person's violation, necessary to trigger the imposition of secondary costs, would be lacking. Preventive efforts are principally directed at the individual potential offender, but effective efforts require some interaction between society and individuals and among individuals. Communication is the basic vehicle for facilitating this interaction and determines the actual *effective* level of the three elements of prevention. It is therefore an important policy variable.

The objective probability of the primary general deterrent punishment depends both upon the investigative and enforcement procedures employed by society and upon the amount of enforcement resources society devotes to the detection, apprehension, prosecution, and punishment of violators. Clearly, for any particular prohibited activity, this probability will be positively related to the amount of resources allocated to these efforts.[29]

The apprehension and enforcement process consists of a series of steps, each of which must occur before the legal punishment can be imposed upon an offender. The probability that an offender will receive the legal punishment (F_{op}) is therefore the product of a series of elemental probabilities each representing the probability that a particular step in the procedure will occur. Thus, F_{op} is a joint

29. Positing this positive relation assumes that the region of diminishing returns to any or all enforcement efforts has not been reached.

probability. The first probability in the series—detection, for example—is a simple probability. Each subsequent elemental probability, however, is a conditional probability since its occurrence depends upon the occurrence of each prior step. Thus, if apprehension is the second step in the process, the elemental probability of apprehension is not the probability that an offender will be apprehended, but rather the probability that an offender *whose offense is detected* will be apprehended. Similarly, if enforcement is the third step in the process, the elemental probability of enforcement is the probability that an *apprehended* offender will have the charges against him proven.

Because F_{op} can be viewed as the product of a series of elemental probabilities, society, in an effort to increase the number of offenders punished and thus the preventive influence of primary general deterrence, could choose to devote additional resources to increasing any of the elemental probabilities. If society expends all of its additional resources to increase only one probability, however, primary general deterrence will not be increased because the subsequent probability in the series will decline. For example, an increase in the probability of apprehension will not increase primary general deterrence if enforcement resources are being fully utilized and resources are unavailable to bring to trial the additional offenders apprehended. As more offenders are apprehended while the same number of offenders are convicted, the probability of enforcement will decline and may offset the rise in the probability of apprehension. Thus, it would clearly be more efficient for society to add additional resources to each step in the process since only this method of allocation ensures an over-all increase in primary general deterrence. Any other allocation approach effectively creates bottlenecks in the enforcement process.

With this caveat in mind, F_{op} can be replaced with a product of elemental probabilities. The precise choice of elemental probabilities to include in the general model is somewhat arbitrary since the probabilities vary in importance with the prohibited activity under consideration. The probability of enforcement (F_{oe}), which includes the probability of proving a case or establishing a cause of action, is a basic variable for most offenses and should clearly be included in a general model. The selection of other variables is more arbitrary for they may or may not be important in a particular application of the model. For example, in the case of murder or robbery, the probability of apprehension of the violator is probably the most important variable in resource allocations because it is likely to be highly elastic with respect to new inputs. The probability of detection of the violation, however, is likely to be naturally close to one and hence inelastic with respect to additional inputs. In the case of insider trading, both the probability of discovering a violation and the probability of determining the violator's identity may be very

elastic with respect to additional resource input.[30] The probability of discovery (F_{od}) and the probability of enforcement (F_{oe}) are included in the general model as the most efficient points for resource allocation with the understanding that other variables may be substituted or added when the model is applied to a particular offense.

Secondary general deterrent punishments are triggered by the same resource expenditures that trigger primary general deterrence. It is the detection, apprehension, prosecution, and punishment of violators that creates the scandal and draws the attention of the peers, employers, and friends who impose these secondary punishments. Thus, the probability of secondary general deterrence (F_{os}), like the probability of primary general deterrence, depends upon the elemental probabilities of successful completion of the steps in enforcement, F_{od} and F_{oe}. However, it depends upon them in a significantly different manner. F_{os} is the *sum* of F_{od} and F_{oe}, rather than the product, because the event of discovery alone, coupled with communication, *can* bring about secondary punishments: Full enforcement is not a *sine qua non* to secondary counter-motivations,[31] although the enforcement of a case to judgment or conviction does increase their force and their probability of occurrence. Thus, it is the combination of the two events, their sum, that determines F_{os}.

The probabilities in relation (3) can now take on a more explicit form:

$$F_{pp} = k \cdot F_{op} \quad (4)$$

$$F_{ps} = k \cdot F_{os} \quad (5)$$

where

k = communication factor, which is variable;
F_{op} = objective probability of primary general deterrent punishment;
F_{os} = objective probability of secondary general deterrent punishment.

By substituting in the basic elemental probabilities of discovery and enforcement, (4) and (5) become

$$F_{pp} = k(F_{od} \cdot F_{oe}) \quad (6)$$

$$F_{ps} = k(F_{od} + F_{oe}) \quad (7)$$

30. In a civil suit apprehension is not necessary; judgment for damages may be established without the individual's presence. However, successful enforcement of judgment will be necessary.

31. Because every step in the enforcement process is not necessary to trigger secondary punishments, alterations in procedural and investigative techniques will have greater impact on the counter-motivations arising from secondary general deterrence than on the counter-motivations arising from primary general deterrence. An individual will perceive that he might receive secondary punishment even though the enforcement procedure beyond the discovery stage breaks down.

where

F_{od} = objective probability of discovery;
F_{oe} = objective probability of enforcement.

The relationships among the elements of prevention as expressed in (3) now become more explicit:

$$\pi = F_b \cdot B - [k(F_{od} \cdot F_{oe})P + k(F_{od} + F_{oe})S + D_3] \qquad (8)$$

The final factor in the model, socio-pedagogical influence (D_3), requires a more concrete formulation before the model can be employed. Effective prevention, or at least its development, is a dynamic process. Socio-pedagogical influence is clearly the most dynamic element in the model since its development depends upon the pattern of resource allocation over long periods of time.[32] By definition, socio-pedagogical influences presently associated with a particular activity depend upon past enforcement and punishment patterns for that activity since the punishment of offenders is society's principal teaching mechanism.

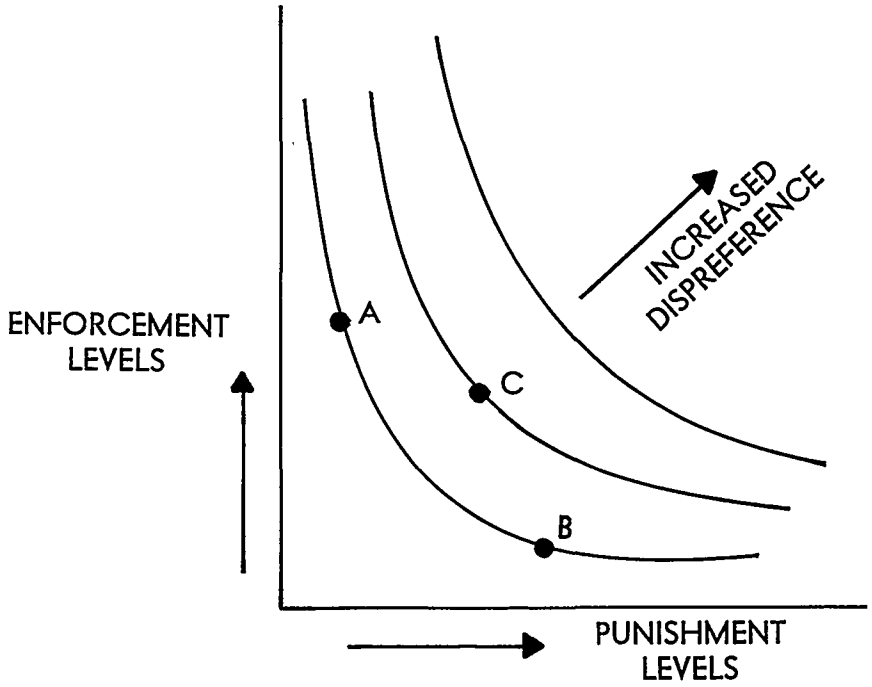
Past punishment levels and society's past enforcement efforts are therefore important factors in determining socio-pedagogical influences. These factors convey to individuals society's relative ranking, in terms of social undesirability, of each prohibited activity among all the activities it has prohibited. This item of information is instrumental in developing norms or attitudes toward the prohibited activity and in creating the individual's barrier to contemplation of the activity.

The punishment level and enforcement effort level for a particular offense interact to indicate society's relative ranking of the offense. This interaction can be demonstrated by imagining a coordinate quadrant, as in Figure 1, where each point represents a possible combination of a punishment level and an enforcement resource allocation level. Points *A*, *B*, and *C* represent three prohibited activities. A set of social indifference curves[33] can be imposed upon the quadrant with each curve plotting offenses that are equally disapproved by society. Offenses *A* and *B* may be ranked equally even though *B* is punished at a higher level than *A*, while society expends more enforcement resources on *A* than on *B*; both levels must be considered to determine how society ranks an offense. Those points lying on indifference curves farther from the origin represent activities con-

32. *See* text at notes 18-22 *supra*. Socio-pedagogical influences may be reinforced by secondary as well as primary general deterrence and, in turn, socio-pedagogical influences will affect secondary general deterrence by teaching people to stigmatize violators. Judgments as to the extent of this interrelationship are best made in specific applications of the model.

33. Indifference curves indicate preference rankings. Although only three curves are shown, there are, in fact, an infinite number establishing the ranking of all points.

Figure 1



sidered more onerous by society. The whole series of indifference curves represents society's total ranking of all prohibited activities.[34]

As demonstrated by the indifference curve analysis, an individual can tell little about the relative undesirability of an offense just by looking at the absolute levels of punishment and enforcement for that offense. A fine of $500, for example, has one meaning if ninety-five per cent of all other offenses are punished by a term of imprisonment and a different meaning if ninety-five per cent of all other offenses are sufficient resources to apprehend and punish half the individuals who commit a certain offense. The significance of this fact will vary depending upon whether society, on the average, expends resources punished by a fine of less than $500. Similarly, society may expend sufficient resources to apprehend and punish half the individuals who commit a certain offense. The significance of this fact will vary depending upon whether society, on the average, expends resources sufficient to apprehend and punish twenty per cent of all offenders or eighty per cent of all offenders. Thus, society's message as to the undesirability of an offense is much clearer if the enforcement effort level and punishment level for the particular offense are compared with the average levels for all offenses.

It is appropriate at this point to begin to formulate the socio-pedagogical influence factor more concretely. In the model as developed so far, F_{op} represents the objective probability that an individual

34. *See* E. SUTHERLAND, ON ANALYZING CRIME 76-77 (1973).

who commits a particular offense will be punished. The relative enforcement level of a particular prohibition can therefore be expressed as $F_{op}/\bar{F}_{op}$, where $\bar{F}_{op}$ is the average enforcement probability for all offenses. The ratio $F_{op}/\bar{F}_{op}$ may be termed R_e. In a similar manner, it is possible to formulate more concretely the relative punishment level for an offense. In the model above, P represents the punishment level for an offense. If $\bar{P}$ is the average punishment level for all offenses, the relative punishment level for an offense become $P/\bar{P}$. The ratio may be called R_p.[35]

These ratios together indicate the societal dispreference for an offense[36] and thus serve as society's teaching message for the development and maintenance of socio-pedagogical influences. Since R_e and R_p each convey a message to individuals, the total message is the sum of the two:[37]

$$\text{Message} = (R_e + R_p) \qquad (9)$$

It might be argued that enforcement levels are a more effective message than punishment levels,[38] and hence that (9) should be a weighted sum. Whether enforcement levels are more effective than punishment levels is an empirical question, however, and is more appropriately taken into consideration in applying the general model to specific offenses. As used in this model, the summation indicates simply that the total message is given by the two parts acting together.

Consideration again must be given to the fact that potential offenders are not fully apprised of the activities of enforcement agencies and thus base their decisions whether to offend on their own perceptions of those activities. Socio-pedagogical influences are therefore dependent not upon the message actually created by society but rather upon the portion of that message communicated to individuals. This may be called the effective message, which will be some multiple or proportion, k, of the actual message, where k represents the communication factor and $0 \leqq k$. None of the message, some of the message, or all of the message may be communicated as k varies from zero through one. It is also possible to publicize enforcements, investigations, etc., so strongly and repeatedly that the effect of the message is multiplied, in which case individuals will view the offense as relatively more onerous than society views it. In this case k would be greater than one.

Effective communication, k, will be a function of several varia-

35. F_{op} and P will also be averages since the enforcement resources and penalty will rarely be identical for every violation of a given law but will vary over some range; the F_{op} and P representative of a given activity would typically be the average.

36. Individuals may perceive the rankings of offenses somewhat differently, for they will combine the message received from society with their existing religious and ethical views and their views about socially acceptable conduct. Yet, these individual differences are apt to average out so that we can state as a generalization that socio-pedagogical influence is some function of the above-described ratios.

37. *See* text at note 11 *supra.*

38. *See, e.g.*, Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (1968).

bles, most of which are exogenous, such as the existence of news media, the media's attitude toward disseminating such information, and the number of occurrences that trigger dissemination. A triggering occurrence might be a successful enforcement, the imposition of an unusual punishment, or the passage of a new law or regulation. Effective communication will be positively related to the incidence of these occasions that trigger discussion or media coverage. Enforcement agencies might increase communication by creating triggering occasions in the form of press releases about new levels of enforcement resource expenditures or procedural changes that permit easier enforcement.[39]

The message actually communicated to individuals can be represented as:

$$\text{Effective Message } (M) = k(R_e + R_p). \qquad (10)$$

The k factor thus determines whether an effective message will be nonexistent, widely communicated, or somewhere in between. The effectiveness of the message depends in part upon the nature of the prohibited activity. An activity may be such that the only occasions that trigger communication are successful enforcements. If R_e for the activity is extremely low so that enforcements are rare and communication, consequently, is sporadic, M for the offense might approach zero even though R_p for the offense is positive or even high.

At any given time, t, there will be an existing level of socio-pedagogical influence at work in the society. That level will be some function of the norm-developing messages communicated in the past by enforcements and punishments. However, socio-pedagogical influences will be a function not of the total effective message sent out in each prior time period,[40] but rather of the changes in the content and intensity of the message that have occurred over time. It is the alterations in the effective message, caused either by changes in the R_e and R_p ratios for the offense or by changes in the effectiveness of communication, that both reflect changes in society's disapproval ranking of the prohibited activity and indicate changes in the norms that society wishes to foster. Thus, the socio-pedagogical influence (D_3) in any time period t is some function, *f*, of the changes in the message that were made in the prior period plus the level of D_3 that was operating in that prior period. This can be expressed as:

$$D_{3_t} = D_{3_{t-1}} + f\left(\frac{\partial M}{\partial k_{t-1}} + \frac{\partial M}{\partial R_{e_{t-1}}} + \frac{\partial M}{\partial R_{p_{t-1}}}\right) \qquad (11)$$

39. Because effective communication and enforcement levels are neither functionally related nor dependent upon the same factors, they will not move together. Communication may be increased by triggering occasions, but R_e depends upon enforcement resource allocation, not the number of successful enforcements.

40. This total message merely reinforces present levels of D_3.

where

$\left(\frac{\partial M}{\partial k_{t-1}} + \frac{\partial M}{\partial R_{e_{t-1}}} + \frac{\partial M}{\partial R_{p_{t-1}}}\right)$ = the change in message in time t-1;

$f\left(\frac{\partial M}{\partial k_{t-1}} + \frac{\partial M}{\partial R_{e_{t-1}}} + \frac{\partial M}{\partial R_{p_{t-1}}}\right) = \Delta D_{3_{t-1}}$, the change in socio-pedagogical influence between times t and t-1.

But,

$$D_{3_{t-1}} = D_{3_{t-2}} + f\left(\frac{\partial M}{\partial k_{t-2}} + \frac{\partial M}{\partial R_{e_{t-2}}} + \frac{\partial M}{\partial R_{p_{t-2}}}\right) \quad (12)$$

Thus, socio-pedagogical influence at any time t is the sum of the ΔD_3's from all prior times:[41]

$$D_{3_t} = \int_0^{t-1} f\left[\frac{\partial M}{\partial k}\frac{dk}{dt} + \frac{\partial M}{\partial R_e}\frac{dR_e}{dt} + \frac{\partial M}{\partial R_p}\frac{dR_p}{dt}\right]dt \quad (13)$$

From (10), we know

$$\frac{\partial M}{\partial R_e} = k; \quad \frac{\partial M}{\partial R_e} = k; \quad \frac{\partial M}{\partial k} = (R_e + R_p).$$

Therefore,

$$D_{3_t} = \int_0^{t-1} f\left[k\left(\frac{dR_e}{dt}\right) + k\left(\frac{dR_p}{dt}\right) + (R_e + R_p)\frac{dk}{dt}\right]dt \quad (14)$$

The model thus suggests that socio-pedagogical influences at any time are a function of the sum of past changes in society's rankings of the prohibited activity to the extent that they are communicated, $k\left(\frac{dR_e}{dt}\right) + k\left(\frac{dR_p}{dt}\right)$, and the increase or decrease in the portion of the message existing at any time that is effectively communicated, $[(R_e + R_p)\frac{dk}{dt}]$.

This model of the development of socio-pedagogical influences over time indicates clearly that enforcement and punishment efforts in any period are both a present consumption, in that they contribute to current prevention efficacy, and an investment, in that they yield returns in the form of future prevention efficacy. In considering whether punishment and enforcement policies will be sufficiently beneficial to justify their costs, it therefore is important to consider the investment returns on the current expenditures.

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41. Assuming $\frac{\partial D_3}{\partial M}, \frac{\partial M}{\partial R_e}, \frac{\partial M}{\partial R_p}, \frac{\partial M}{\partial k} > 0$.

By substituting (14) into (8), the final form of the general framework is obtained:

$$\pi = F_b \cdot B - \left\{k(F_{od} \cdot F_{oe})P + k(F_{od} + F_{oe})S + \int_0^{t-1} f\left[k\left(\frac{dR_e}{dt} + \frac{dR_p}{dt}\right) + (R_e + R_p)\frac{dk}{dt}\right]\right\} \quad (15)$$

where

Resource input point (1) = P;

Resource input point (2) = F_{od}, F_{oe};

Resource input point (3) = k, $\frac{dk}{dt}$.

C. *Implications of the Model and Completion of the Framework*

The model of general prevention just developed places the elements of prevention into perspective and identifies the resource input points. In so doing, it facilitates determining how resources, added at given resource input points, influence the individual's resource allocation decision. There are three resource input groups: (1) resources necessary to apply the legally designated punishment, such as the costs of maintaining a prison system or of imposing fines; (2) detection, enforcement, and prosecutorial resources, which directly determine the objective probabilities of apprehension and punishment; and (3) resources expended upon effective communication and publicity, which directly contribute to the perceived probabilities and facilitate the development of socio-pedagogical influences. The general model indicates that these three resource input groups potentially have multiple outputs in the total prevention plan. Resources added at the first input point contribute both to primary general deterrence and to the message for socio-pedagogical influences. Resources added at the second point strengthen primary and secondary general deterrence and are also a portion of the socio-pedagogical message. Resources added at the third point alter the perceived probabilities of primary and secondary general deterrence and control the effectiveness of the socio-pedagogical message, which is created by the expenditure of resources at the first two points.

The model also indicates certain bottlenecks in a total prevention plan that affect the efficiency of particular resource uses. Resources devoted to the maintenance of punishments and to the development of objective probabilities will be much less productive without effective communication. Without the expenditure of resources to maintain significant objective probabilities, the maintenance of institutions for imposing punishments, such as prisons, may consume resources while hardly benefiting prevention efficacy. Efforts to increase a

particular elemental probability, which would contribute to the total objective probability that primary general deterrent costs will be imposed, will be inefficient if the other elemental probabilities are extremely low.[42] These observations suggest limitations upon the range of resource combinations that will efficiently contribute to a prevention plan.

Finally, the model shows that prevention resource expenditures contribute to both present and future preventive efficacy. Resources allocated to implementing punishments and developing objective probabilities have immediate preventive effects and, in addition, yield future returns in so far as they develop the norms underlying socio-pedagogical influences. A communication system designed to maintain the effectiveness of socio-pedagogical influences is an investment. This interaction of present and future benefits indicates the importance of long-range planning and the need to consider future returns when deciding whether a resource use will produce benefits sufficient to justify its cost.

The model takes on its full predictive powers only when, for the prohibited activity under consideration, empirical assumptions are made about the elasticity of total counter-motivations (C) with respect to each of the variables—communication, objective probabilities, punishment levels, etc. The making of assumptions essentially requires a determination of the most influential variables, those variables that will cause the greatest increase in C for a given resource input. Variables that cause a greater change in C will reduce π to zero more efficiently—that is, with less resource cost.

It is at this point appropriate to complete the framework of prevention resource allocation by considering more concretely the second resource allocation decision of concern in the framework—the efficient allocation of social resources to prevention. While the discussion thus far has focused on placing the individual's allocation decision in a more concrete form, it has indirectly dealt with the question of efficiently allocating prevention resources. Thus, while equation (15) is an embodiment of the individual's allocation decision, it is also the objective function for societal resource allocation; society desires to reduce (15) to zero. Furthermore, the concrete form of the general prevention model facilitates recognition of the resource input points and indicates the multiple impact of some resource inputs.

The objective in developing this framework for the allocation of prevention resources is not to determine how to prevent a person from engaging in a prohibited activity at any cost, but rather to plan an effective prevention mechanism at the lowest possible social cost.[43]

42. *See* text following note 29 *supra.*

43. "Social cost" includes the expenditure of all social resources, both tangible

The goal in using the framework, accordingly, is to minimize social costs, K, subject to the constraint that $\pi = 0$, that is, that the typical individual is deterred. Although deterrence also exists at $\pi < 0$, it is inefficient to expend resources to achieve that result if persons are effectively deterred by nullifying their benefits.

The minimum cost necessary to achieve effective deterrence, determined from the general prevention model, may be unreasonably high for a particular offense. There will be some maximum cost, K*, that society is willing to incur to achieve effective prevention. That maximum cost will presumably be the social harm that would result from the occurrence of the prohibited activity, since a society will not want to expend more resources on preventing an offense than the resource cost it would incur if the offense were committed.

Society has two possible options if the minimum cost of effective prevention exceeds K*. One option is to forgo spending resources on prevention and, instead, spend resources on redressing the injuries of the offense victims. The other option, which may or may not be feasible, is to devise a resource allocation plan with the objective of deterring only some of the potential offenders. The general prevention model developed above assumes one typical individual who decides whether to violate a particular proscription. But some prohibited activities may actually have subgroups of violators, each with its typical representative, who may be more susceptible to societal prevention efforts than the offender that is typical of all violators of the offense. In such instances, it may be possible to design prevention plans at less than K* costs to deter members of such subgroups while other potential violators go undeterred. Thus, the purpose of this second option is to discover "cheaper prohibited act avoiders." The individual who is influenced only by a full-time policeman at his elbow is left to engage in prohibited activity, although obviously this fact is not announced to him.

The model of general prevention indicated that prevention expenditures are an investment as well as a present consumption. This in turn implies that consideration must be given in resource allocation decisions to the future returns on the investment. To avoid eroding an investment built over time and capable of yielding future returns, prevention policy decisions should be made so as to avoid reducing existing levels of socio-pedagogical influences. It is likely that any resource savings resulting from a decision not to maintain existing socio-pedagogical influences would be less than the future returns that could be expected from D_3.[44]

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and intangible. Intangible costs might be human suffering or the lowering of ethical standards.

44. This assertion may not be true for all offenses and, indeed, is merely a rebuttable presumption in the absence of empirical data for specific activities. Thus, in allocating resources for the prevention of all prohibited activities, it might properly

Socio-pedagogical influences are eroded by any negative change in D_3 over a time period. The requirement that a prevention plan not erode D_3 can therefore be expressed as a final constraint on the framework: The change in D_3 (ΔD_3) must be greater than or equal to zero. For purposes of this Note, it is assumed that this constraint does apply.

In its final form, the general framework for the allocation of prevention resources can thus be formulated as follows:

Costs (K) must be minimized subject to the requirements, that

(1) $\pi = 0$ (deterrence be achieved)

(2) $k\left(\frac{dR_e}{dt} + \frac{dR_p}{dt}\right) + \left(R_e + R_p\right)\frac{dk}{dt} \geq 0$ (socio-pedagogical influences not be eroded)

and, implicitly,

(3) $K \leqq K^*$ (the resource cost of deterrence be less than the resource cost associated with occurrence of the offense).

III. Specific Application

In this part, the usefulness of the general framework in making resource allocations is illustrated by applying it to a specific problem—insider trading in corporate securities.[45]

A. *An Overview of Insider Trading*

Insider trading refers to the use of nonpublic information[46] in purchasing or selling personal holdings of corporate securities so as to make a profit or to prevent a loss.[47] Typically, this trading is done by corporate officers or directors in the securities of their own firms,

be concluded that more social benefit could be gained from allowing the erosion of socio-pedagogical influences for activity *A* and allocating the freed resources to the prevention of activity *B*.

45. Securities Exchange Act of 1934 § 16, 15 U.S.C. § 78p (1970), represents a congressional determination that insider trading should be prevented. That provision was based on the belief that efficiency in the capital markets is furthered by investor confidence, which is prompted through fair markets without insider trading. *See* S. Rep. No. 1455, 73d Cong., 2d Sess. 68 (1934).

Some commentators argue that insider trading furthers market efficiency because it results in the more accurate and rapid market reflection of actual stock values. *See* H. Manne, Insider Trading and the Stock Market (1966); Wu, *An Economist Looks at Section 16 of the Securities Exchange Act of 1934*, 68 Colum. L. Rev. 260 (1968). A societal desire to prevent insider trading is presumed in this Note, as is the existence of sufficient social costs associated with unrestrained insider trading to justify the use of resources in its prevention. This, of course, does not mean that *any* amount of resource cost would be justified.

46. Such information may include, for example, news of a forthcoming merger, a tender offer, unusual earnings figures, or the development of a new product.

47. *See* SEC v. Texas Gulf Sulphur Co., 401 F.2d 833, 848 (2d Cir. 1968), *cert. denied*, 394 U.S. 976 (1969); W. Painter, Federal Regulation of Insider Trading 2-3 (1968).

but any person profiting through trading in the stock of any corporation by using nonpublic information is an inside trader.[48]

Present regulation and enforcement policies concerning insider trading are contained in sections 16 and 10 of the Securities Exchange Act of 1934,[49] SEC rules 16(a), 16(b), and 10b-5[50] and the relevant SEC and court interpretations.[51] Under section 16(b), any officer, director, or controlling shareholder of a corporation who sells and purchases (or purchases and sells) stock of his company within a six-month period is conclusively presumed[52] to have traded on the basis of inside information and is held liable to his corporation for the profits he realizes and the losses he avoids. Section 10(b) and rule 10b-5 are broader and more imprecise than section 16(b): They prohibit fraudulent and deceitful activities in connection with the purchase or sale of any security.[53] In general, section 16(b) protects a corporation and its shareholders against insider trading by the corporation's officers, directors, and controlling shareholders, while rule 10b-5 protects investors against insider trading in general.[54]

Due to its relatively unambiguous design and its lack of any scienter requirement, section 16(b) serves as a stiff deterrent for a very limited portion of insider trading. The objective six-month test allows plaintiffs to avoid the problem of proving that a defendant officer, director, or ten-per-cent shareholder made actual use of any inside information available to him. Section 16(a)[55] facilitates the enforcement of 16(b) by requiring each individual, upon becoming an insider, to report any holdings of his company's securities and to report any changes in those holdings each month. Enforcement is also facilitated by a provision allowing either the corporation directly or its

48. *See* W. PAINTER, *supra* note 47, at 2-3.

49. 15 U.S.C. §§ 78p(b), 78j (1970).

50. 17 C.F.R. §§ 240.16a-1 to -10 (1974); 17 C.F.R. §§ 240.16b-1 to -11 (1974); 17 C.F.R. § 240.10b-5 (1974).

51. Where broker-dealers are involved, a rule 10b-5 claim is usually joined with claims under rule 15cl-1, 17 C.F.R. § 240.15cl-2 (1974), or Section 17(a) of the 1933 Act, 15 U.S.C. § 77q (1970), for good measure. *See* L. LOSS, SECURITIES REGULATION 1449 (student ed. 1961).

52. Exceptions to this objective test have been promulgated to avoid automatic liability where a conclusive presumption would be harsh and disrupt market functions. See 17 C.F.R. §§ 240.16b-1 to -11 (1974).

53. *See* 17 C.F.R. § 240.10b-5 (1974):

> It shall be unlawful for any person, directly or indirectly, by the use of any means or instrumentality of interstate commerce, or of the mails, or of any facility of any national securities exchange,
>
> (1) to employ any device, scheme, or artifice to defraud,
>
> (2) to make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in the light of the circumstances under which they are made, not misleading, or
>
> (3) to engage in any act, practice, or course of business which operates or would operate as a fraud or deceit upon any person, in connection with the purchase or sale of any security.

54. *See* W. PAINTER, *supra* note 47, at 8-23.

55. 15 U.S.C. § 78p(a) (1970). *See* L. Loss, *supra* note 51, at 1038-40.

shareholders derivatively to sue for the insider's profits,[56] and by the judicial abrogation of both security-for-expenses requirements[57] and requirements that the plaintiff be a stockholder at the time of the wrong.[58] To provide an additional incentive for the civil enforcement of section 16(b), courts allow plaintiffs to subtract counsel fees from the recovered profits in amounts ranging from one-quarter to one-half of the total.[59]

Thus, section 16(b) has been designed to ensure its vigorous enforcement. Perfect ease of enforcement has been hampered, however, by interpretative uncertainties that remain. In particular, it is unclear whether the terms "purchase and sale" or "sale and purchase" cover unusual situations such as the conversion of preferred stock or stock exchanges occurring in connection with mergers.[60] Courts apparently follow one of two approaches in deciding whether a transaction is a "purchase and sale" for the purpose of section 16(b). The objective approach—applying the section in a mechanical manner even where no wrong is apparent—is based on the theory that Congress accepted the danger of subjecting the innocent to 16(b) liability in order to obtain maximum deterrence. The pragmatic approach—applying 16(b) only to those transactions involving some actual danger of abuse of inside information—has also been followed.[61] Uncertainties such as this have tempered the strong prevention influence embodied in the section's mechanical six-month test.

Rule 10b-5, the basis today for a broad and uncertain concept of insider liability, was originally conceived as a general anti-fraud provision without any particular application to insider trading.[62] The rule standing alone therefore did not have a preventive effect upon insider trading until courts decided to specifically apply it to insider trading and concluded that the rule provided individuals with a private damage action for violations of its prohibitions.[63] In the 10b-5 con-

56. Shareholders must first request that the corporation bring the suit. If it fails to do so within 60 days, the shareholders are automatically free to begin the derivative suit. Securities Exchange Act of 1934 § 16(b), 15 U.S.C. § 78p(b) (1970).

57. *See* J.I. Case Co. v. Borak, 377 U.S. 426, 434-35 (1964); W. PAINTER, *supra* note 47, at 15.

58. *See* L. LOSS, *supra* note 51, at 1046.

59. *See id.* at 1052; Cook & Feldman, *Insider Trading Under the Securities Exchange Act*, 66 HARV. L. REV. 385, 421-22 & nn.142-43 (1953).

60. *See* W. PAINTER, *supra* note 47, at 42.

61. *See id.* at 41-52; *id.* at 10-14 (Supp. 1974).

62. *Id.* at 19.

63. *See* Superintendent of Ins. v. Bankers Life & Cas. Co., 404 U.S. 6, 13 (1971); J.I. Case Co. v. Borak, 377 U.S. 426 (1964); Kardon v. National Gypsum Co., 73 F. Supp. 798 (E.D. Pa. 1947); Note, *SEC Rule 10b-5: A Recent Profile*, 13 WM. & MARY L. REV. 860, 866 (1972). The courts have justified the implication of private causes of actions in securities regulation by the need for more enforcement than the SEC can provide. *See, e.g.*, J.I. Case Co. v. Borak, 377 U.S. 426, 433-35 (1964); Chris-Craft Indus. v. Piper Aircraft Co., 480 F.2d 341, 357 (2d Cir.), *cert. denied*, 414 U.S. 910 (1973).

text, courts expanded the narrow definition of insider trading contained in 16(b) in order to cover situations in which material, nonpublic, corporate information is used by any individual to disadvantage others in securities trading.[64] In devising the 10b-5 cause of action, courts eschewed requiring plaintiffs to comply with the traditional elements of a common-law fraud action[65] and allowed plaintiffs to recover attorney fees.[66] In so doing, they in effect enlisted private plaintiffs to supplement SEC enforcement efforts and thereby subjected insiders to the dangers of incurring huge liabilities to large numbers of investors.[67]

Section 16(b) and rule 10b-5 have thus, over the past several decades, taken different approaches to the problem of insider trading. Section 16(b) has dealt with a very limited portion of insider trading by using a conclusive rule of liability and strong inducements to civil enforcement. Rule 10b-5 has dealt with the amorphous body of all insider trading via a case-by-case development of preventive influences. Because of their differences, 16(b) and 10b-5 can be viewed as comparative experiments in the prevention of insider trading. The data from these experiments can be used both to discover the effectiveness of past resource allocations and to determine whether resources might be better allocated for more effective prevention of insider trading.

B. *Characteristics and Motivations of the Typical Offender*

Before considering insider trading in light of the general framework, it is appropriate to analyze the motivations of the "typical" inside trader that must be offset through the utilization of prevention resources. The essential characteristic of the potential inside trader is

64. *See, e.g.*, SEC v. Texas Gulf Sulphur Co., 401 F.2d 833, 848 (2d Cir. 1968), *cert. denied*, 394 U.S. 976 (1969); Cady, Roberts & Co., 40 S.E.C. 907 (1961); W. PAINTER, *supra* note 47, at 118, 222-23.

65. *See* L. LOSS, *supra* note 51, at 1435; *The Supreme Court, 1971 Term*, 86 HARV. L. REV. 50, 260 n.2, 270 (1972). The exact parameters for fraud that have been worked out in 10b-5 actions are not entirely clear. The reliance requirement of common-law fraud has apparently been weakened so as to approach a presumption of reliance in nondisclosure cases or situations of impersonal fraud on the market. *See* Note, *The Reliance Requirement in Private Actions Under SEC Rule 10b-5*, 88 HARV. L. REV. 584 (1975); Note, *supra* note 63, at 885-95. There has been relaxation of both scienter and materiality requirements, *see* Note, *supra* note 63, at 867-85; *but see* Ernst & Ernst v. Hochfelder, 44 U.S.L.W. 4451 (U.S. March 30, 1976) (No. 74-1042), and causation in fact, rather than the more stringent proximate cause, has been found adequate, *see* Note, *supra* note 63, at 892-99. Similarly, it is enough that the fraud occurred in connection with a purchase or sale; strict privity is not required. *See* Mitchell v. Texas Gulf Sulphur Co., 446 F.2d 90 (10th Cir.), *cert. denied*, 404 U.S. 1004 (1971).

66. *See* Mills v. Electric Auto-Lite Co., 396 U.S. 375, 389-97 (1970) (misleading proxy solicitation).

67. *See* Note, *The Measure of Damages in Rule 10b-5 Cases Involving Actively Traded Securities*, 26 STAN. L. REV. 371, 385 (1974).

that he is capable of being deterred by affirmative enforcement policies. Recorded incidents of individuals who chose not to trade on inside information[68] and of corporations that promulgated new disclosure policies and adopted intra-corporate sanctions for abuse of inside information[69] make it difficult to contest the notion that some deterrence of insider trading is possible.

As noted above, an inside trader is any person who obtains material nonpublic information about a corporation and proceeds to trade in that corporation's securities without first publicly disclosing the information. This definition potentially covers a broad range of people. Generally, however, the prevention system can be tailored for inside traders who are either corporate directors, controlling shareholders, top-level corporate managers, or members of the financial community who serve corporations as broker-dealers, underwriters, or analysts. Such individuals are likely to be executives or professionals from middle or upper socioeconomic groups. According to a survey by the *Harvard Business Review*, this means that their ethical decisions may be strongly influenced by their personal codes of behavior[70] and that they may view a high probability of detection and punishment as an important counter-motivator.[71] These generalizations have several ramifications. First, inside traders may be strongly affected by socio-pedagogical influences if such influences can be well developed through clear definitional statements of the prohibited activity.[72] Second, in the development of socio-pedagogical influences, the most important element of the message, M, is likely to be R_e—the willingness of society to invest resources in punishing

68. For example, one officer of the failing Penn Central Railroad refused to sell the stock that represented nearly his entire personal fortune before its market price plummeted from $88.50 to $10 per share. Although he seems to have been deterred, one of his colleagues apparently was not: He traded and then attempted to cover his violation by requesting his bank to pretend to force his sale of stock to cover a loan. *See* N.Y. Times, Aug. 7, 1972, at 1, col. 2 (late city ed.). In another case, a securities analyst, after receiving potentially material inside information, refused to reveal it to a customer. Influenced by then current proceedings in the Equity Funding scandal, he felt it would certainly be considered a misuse of nonpublic material information. *See* Wall St. J., June 7, 1973, at 6, col. 3 (eastern ed.). At least one commentator has concluded that "white-collar crime" is more easily deterred than other crime. *See* Chambliss, *Types of Deviance and the Effectiveness of Legal Sanctions*, 1967 WIS. L. REV. 703, 712-14.

69. *See, e.g.*, N.Y. Times, April 29, 1965, at 45, col. 7 (late city ed.); Wall St. J., Oct. 8, 1969, at 15, col. 1 (eastern ed.); *id.*, May 4, 1965, at 16, col. 3 (eastern ed.); *id.*, April 27, 1965, at 1, col. 6 (eastern ed.).

70. Baumhart, *How Ethical Are Businessmen?*, 39 HARV. BUS. REV. 6, 19, 156, 158 (July-Aug. 1961). Although these generalizations are plausible, sufficient empirical data do not presently exist to verify them completely.

71. *Id.* at 19. It is still possible that business executives are less counter-motivated by any given probability than other individuals since there is some very limited evidence that business executives may be more risk-preferring than other types of administrators. *See* Brown, *Risk Propensity in Decision-Making: A Comparison of Business and Public School Administrators*, 15 ADMIN. SCI. Q. 473, 476 (1970).

72. *See* Baumhart, *supra* note 70, at 168, 170.

violators. Third, primary general deterrence, with counter-motivations in the form of fears of being caught, is the most important element of prevention. Finally, primary general deterrence may be closely followed in preventive influence by secondary general deterrence since the typical inside trader, an executive or professional, is likely to be sensitive to possibilities of shame and loss of reputation[73] and fearful of losing customers, clients, and employment opportunities.[74]

The generalization that the probability of detection and, thus, primary general deterrence (in which the probability of detection has its clearest impact) will be most influential in preventing insider trading is not surprising and probably does not distinguish the typical inside trader from other violators. However, sensitivity to secondary general deterrence may be an important distinguishing characteristic of inside traders. Obviously, these general characteristics can be little more than guidelines and more research and evidence would be helpful.

The typical inside trader is motivated, presumably, by the desire for some financial benefit that he can expect to receive with some substantial probability. For purposes of analysis this motivation can be divided into two parts: the benefit desired by the inside trader and the probability that he will receive that benefit.

In insider trading, benefits take the general form of financial gain or trading profits, but there are some variations. Broker-dealers and analysts who selectively tip to their customers may be motivated by financial gain, but such gain often comes indirectly in the form of contented, regular customers. Motivations for financial gain may vary in intensity depending upon whether the gain takes the form of avoiding a potential loss or ensuring a possible gain. When an insider is attempting to prevent a loss by selling out prior to an expected drop in stock value, his motivations may be stronger than when he is trading on an upswing in the hope of increasing his profits from investment.[75] Whatever the form, however, the motivation to be countered is the desire for wealth.[76]

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73. A survey of businesspeople produced evidence that their fear of imprisonment stemmed from the danger to their reputations and the stigma that they associated with imprisonment. M. CLINARD, THE BLACK MARKET 243-44 (1952). *See* N.Y. Times, Jan. 5, 1972, at 50, col. 3 (late city ed.).

74. Baumhart, *supra* note 70, at 10.

75. Although, due to considerations of fairness, we probably would not want to place stronger primary general deterrent penalties upon those trading in downswings in order to offset the stronger motivation, secondary general deterrence might provide the extra counter-motivation in those cases. An insider who trades before a slump might be stigmatized more than one who traded on an upswing—something analogous to the captain taking the only lifeboat on a sinking ship.

76. This fact alone suggests the counter-motivation most likely to be successful: deprivation of wealth.

The probability that the inside trader will receive his expected benefit is in general quite high. The 16(b) definition of insider trading, which requires both a sale and purchase or purchase and sale for completion of the prohibited act, ensures that the trader will receive the benefits when the prohibited act is carried out. For example, if a corporate director purchases stock with the expectation that it will rise in value and then sells the stock four months later, the violation occurs only upon the moment of sale. At that moment, the director knows precisely the amount of his profits and receives them very soon thereafter. If those benefits are substantial it will be very difficult to offset his motivation.

In the more broadly defined transactions falling under rule 10b-5, the probability of benefit will vary and rarely will be as certain as in the 16(b) context. Under rule 10b-5, the initial transaction completes the prohibited act. The realization of the benefits, however, still depends upon the market's reacting as expected by the insider, which of course can never be predicted by the offender with complete certainty. Yet, a high probability of receiving the benefits can often be expected by the offender due to the very nature of the information used in making the decision to trade. Furthermore, the insider will certainly be successful in making the initial transaction because ready and willing "victims" exist. In other prohibited acts—burglary, for example—there is no willing exchange between the perpetrator and the victim. In the context of insider trading, the open market provides a ready bargain and ensures a high probability of a successful transaction and of final receipt of the benefits.[77] In many insider trading cases, the market-injected uncertainty lowers not the probability of receiving positive benefits but only the probability of receiving some exact amount of benefits. In such cases, the insider presumably associates a range of benefits and probabilities with any transaction, but can be virtually certain that his benefits will fall within that range.

In sum, the financial nature of the potential benefits and the inside trader's high probability of receiving those benefits create strong motivations for an insider transaction and present a strong challenge to any prevention scheme.

C. *Primary General Deterrence and Insider Trading*

Most resource expenditures for the prevention of insider trading have probably been made in the area of primary general deterrence.[78]

77. This may not be true with regard to the stock of small, closely held corporations.

78. Although resource expenditures on F_{op} and P in primary general deterrence should theoretically also impact on socio-pedagogical influences and secondary general deterrence, these expenditures, in fact, have not been made in a manner to influence effectively the other two elements of prevention. *See* text at notes 142-44 *infra.*

Thus, resources have been devoted to the application of penalties (*e.g.*, fines, civil damages, injunctions, suspension of broker-dealer registrations), to detection aids such as the numerous government publications and the policing of the 16(a) reports, and to the various private and SEC investigation and enforcement efforts.

This apparent high reliance upon primary general deterrence can be justified for two reasons. First, as noted above, the typical potential inside trader is probably most strongly counter-motivated by primary general deterrence. That is, a given resource allocation to primary general deterrence (D_1) will increase total counter-motivations (C) more than will an identical quantity of resources devoted to secondary general deterrence or socio-pedagogical influences[79] and will thus make a larger contribution to the reduction of π to zero.[80]

Second, the efficient creation of primary general deterrent punishments is facilitated in the insider trading context by the availability of a penalty—the direct deprivation of economic gain—that can be tailored to offset accurately the offender's benefit from offending. Indeed, in 16(b) actions the offender's penalty—regurgitation of his profits—automatically equals his benefit. The availability of this remedy allows society to offset the offender's benefit without overexpending or underexpending resources—a result that occurs in applying penalties that poorly approximate the offender's benefits. Moreover, it means that the potential offender is likely to be strongly counter-motivated: He will expect the penalty he receives to deprive him of his benefits since he will expect the penalty to change in line with any change in his benefits. It is more difficult in the context of other offenses to design such automatically individualized punishments because it is impossible to determine whether, for example, five years of imprisonment counters the gains from three years of embezzlement either for the typical offender or for a particular offender.

Different approaches have been taken to the creation of primary general deterrent counter-motivations in the 16(b) and 10b-5 contexts. Accordingly, it is possible to evaluate the merits and shortcomings of these approaches to primary general deterrence by examining the past experience.

1. *Section 16(b): The Costs of Total Reliance*

The enforcement of section 16(b) has relied almost solely, and

79. This is particularly true if the resources are applied to detection efforts since the probability of detection is particularly influential to a businessperson. *See* text at notes 70-71 *supra*.

80. However, this does not necessarily justify the allocation of all prevention resources to D_1. If the marginal return to resources employed in D_2 and D_3 is positive, and if diminishing marginal returns to resources devoted to D_1 is assumed, then at some point a greater increase in C can be obtained by shifting resources to D_2 and D_3.

quite effectively,[81] on primary general deterrence. It has done so, however, only at significant cost.

The effectiveness of primary general deterrence in 16(b) cases can be seen by examining equation (15) without the variables for secondary general deterrence and socio-pedagogical influence:

$$\pi = F_b \cdot B - [k(F_{od} \cdot F_{oe})P] \tag{16}$$

The probability of receiving the benefits (F_b) will be nearly equal to one since, as noted above, the 16(b) offense does not occur until both the purchase and sale (or sale and purchase) take place. Since the penalty for violating 16(b) is equal to the amount of the offender's benefit, $P = B$. Consequently we have

$$0 = \pi = B - k(F_{od} \cdot F_{oe})B \tag{17}$$

which reduces to

$$0 = B[1 - k(F_{od} \cdot F_{oe})] \tag{18}$$

Clearly, if $k(F_{od} \cdot F_{oe}) = 1$ (that is, if the perceived probability of punishment is equal to one), the right hand side will reduce to zero and sufficient counter-motivations will theoretically have been supplied by primary general deterrence.[82]

The probability that an offender will be punished, ($F_{od} \cdot F_{oe}$), for a 16(b) violation has been brought very close to one through a combination of procedural and reporting techniques. The publication of the section 16(a) mandatory reports of all sales and purchases by insiders of their companies' securities, coupled with the allowance of attorney fees in 16(b) actions, has provided the means and the incentive for private detection of 16(b) violations and has thus raised

81. Some commentators, however, have argued that section 16(b) has not been successful. *See* H. MANNE, *supra* note 51, at 163-64; Lowenfels, *Section 16(b): A New Trend in Regulating Insider Trading*, 54 CORNELL L. REV. 45, 64 (1968); Comment, *Section 16(b): Re-evaluation Is Needed*, 25 U. MIAMI L. REV. 144, 159 (1970). Others believe that section 16(b) has had precisely the deterrent effect that its framers intended. *See* L. Loss, *supra* note 51, at 1043; W PAINTER, *supra* note 47, at 16, 25. The specific definition of insider trading in section 16(b) has been successful in deterring that very specific type of violation. The section has certainly prevented trading based on inside information that has only a short-lived effect on market prices. Surely the specific language of section 16(b) cannot be expected to prevent insider trading in general.

82. Equation (18) in the text then becomes

$$0 = B[1 - 1 \cdot 1] = 0$$

and the net benefit has been reduced to zero. This assumes $k = 1$, *i.e.*, that levels of communication were such that business executives knew the probabilities and penalties under section 16(b). However, $k = 1$ is plausible since procedures that result in high probabilities were either clear on the face of the statute or were made clear in early enforcements. Since hundreds of insiders report under section 16(a), it is likely that they are apprised of the outline and extent of section 16(b). *See* SEC, OFFICIAL SUMMARY OF SECURITY TRANSACTIONS AND HOLDINGS (1935-1975). Publicity given to early cases also served to reinforce the business community's awareness of the statutory provisions. *See, e.g.*, N.Y. Times, April 21, 1965, at 63, col. 4 (late city ed.).

F_{od} to nearly one.[83] The probability of enforcement following discovery (F_{oe}) is essentially equal to one since the mechanical six-month rule and the lack of a scienter requirement have eased the burden of proof and since the allowance of derivative actions and of generous counsel fees[84] has ensured a large pool of willing plaintiffs. In short, F_{od} and F_{oe} are both very close to one in the 16(b) context. This fact and the fact noted above, that the typical inside trader is likely to be susceptible to high F_{od} and F_{oe} probabilities,[85] explain the success of primary general deterrence in the 16(b) context.

The 16(b) success in using only primary general deterrent countermotivations, however, has in several respects been achieved only at substantial cost. First, the mechanical six-month rule, which has created a high F_{od} and F_{oe}, excludes many individuals who engage in undesirable insider trading from the reach of section 16(b). An insider's use of inside information is no less unfair simply because he did not use it in a quick six-month purchase and sale transaction. Section 16(b) could have avoided a six-month limit in favor of prohibiting insider trading whenever it occurs.

Second, costs result from the lack of any requirement in 16(b) that defendants have actually used inside information in their transactions. While the lack of such a requirement has doubtless raised F_{od} and F_{oe}, the result is that persons totally innocent of actual abuse of inside information are caught in the rigid rule of 16(b) and are forced to regurgitate honestly acquired profits and expend substantial sums on legal fees.[86] This practice is costly to society, as well as to the individual defendants, for it absorbs prevention resources that could better be expended on prosecuting those outside the reach of 16(b) who abuse inside information.

Third, the simplified problems of proof and the automatic allowance of attorney fees have encouraged a group of plaintiffs' attorneys to follow a practice bordering upon champerty that is highly undesir-

83. There is obviously an incentive not to file section 16(a) reports if one has traded, and the SEC has only recently threatened to impose sanctions on delinquent filers. *See* Wall St. J., March 7, 1973, at 21, col. 4 (eastern ed.). In many companies, however, internal company pressures applied by in-house counsel may force the insider to file. There is therefore reason to believe that that F_{od} is still close to one. If the statute of limitations were changed or interpreted to run from the filing of the section 16(a) report rather than from "the date such profit was realized," 15 U.S.C. § 78p(b) (1970), at least one incentive for not filing would be removed. *See* Grossman v. Young, 72 F. Supp. 375 (S.D.N.Y. 1947).

84. *See* text at notes 55-59 *supra.*

85. *See* text at note 71 *supra.*

86. The judicial development of a pragmatic approach to section 16(b) cases, wherein courts look for actual abuse of inside information, *see, e.g.*, Kern County Land Co. v. Occidental Petroleum Corp., 411 U.S. 582 (1973), is probably evidence that innocent parties have been caught by the automatic application of the section.

able[87] and that has probably increased the litigation of borderline or even frivolous cases.

2. *Rule 10b-5: The Problems and Some Proposals*

Rule 10b-5 avoids the rigid rules of section 16(b) and thereby avoids many of the costs incurred by 16(b)'s attempt to maximize F_{od} and F_{oe}. Yet, while 10b-5 has avoided these costs, it has encountered other problems in its implementation of primary general deterrence. This section considers these problems and suggests some changes in resource utilization to alleviate them.

Primary general deterrence is frustrated in the 10b-5 context by the imposition on an offender of penalties unrelated to the offender's benefits from a violation. The tendency has been to impose unduly harsh or unduly lenient penalties ranging from those that would bankrupt most individuals and many corporations[88] to virtually meaningless injunctions or censures.[89] While the former penalties may have a terrifying preventive effect, the latter penalties have more often been applied.[90]

The lack of correspondence between penalties and the offenders' benefits stems principally from limitations upon the SEC, the main enforcement agency for rule 10b-5. This agency is limited in the penalties it can dispense or seek through court action[91] and thus has been forced to rely heavily upon injunctions. Yet, since an injunction obviously has no quality of automatic individualization to the violator's level of benefits, and indeed cannot be individualized, it is rarely a useful penalty for primary general deterrence. When the insider receives no benefits from offending, as in a pure tipper case,[92] an injunction may be appropriate as a *remedy*. The nonexistence of any

87. *See* Magida v. Continental Can Co., 176 F. Supp. 781, 782-83 (S.D.N.Y. 1956); L. LOSS, *supra* note 51, at 1053; W. PAINTER, *supra* note 47, at 16.

88. *See* Ruder, *Texas Gulf Sulphur—The Second Round: Privity and State of Mind in Rule 10b-5 Purchase and Sale Cases*, 63 NW. U. L. REV. 423, 427-29 (1968). The *Texas Gulf Sulphur* litigation involved almost 100 actions seeking millions of dollars in damages. *See* Wall St. J., Oct. 7, 1969, at 15, col. 1 (eastern ed.).

89. *See, e.g.*, Wall St. J., April 30, 1973, at 8, col. 2 (eastern ed.). The SEC has recently recognized that a more comprehensive set of penalties is needed that are not entirely "all-or-nothing" sanctions. *See id.* Jan. 28, 1972, at 2, col. 3 (eastern ed.). *See, e.g., id.*, June 11, 1974, at 2, col. 2 (eastern ed.) (censure rather than injunction).

90. *See, e.g.*, Wall St. J., May 29, 1973, at 10, col. 3 (eastern ed.); *id.*, Sept. 29, 1972, at 5, col. 1 (eastern ed.).

91. The Commission may request a civil injunction against "acts or practices which constitute or will constitute a violation of" the Exchange Act and may also request the Department of Justice to begin a criminal prosecution. Securities Exchange Act of 1934, § 21(e), 15 U.S.C. § 78u(e) (1970). Administrative remedies are also available, including expulsion of members from self-regulatory bodies, Securities Exchange Act of 1934, § 19(h), 15 U.S.C.A. § 78s(h)(3) (Supp. 1976), and censure of investment advisers, 15 U.S.C.A. § 80b-3(e) (Supp. 1976).

92. *See, e.g.*, Wall St. J., Sept. 29, 1972, at 5, col. 1 (eastern ed.).

present benefits in such a case avoids the need to formulate a *penalty* that offsets the offender's benefits, and the injunction serves as a future specific deterrent influence on the particular insider. When the insider does benefit from offending, however, an injunction serves virtually no primary general deterrent purpose as a *penalty*. A potential inside trader will see no counter-motivation in the possibility of being enjoined from doing something that, when the injunction is imposed, he will already have done and may not plan to do again. Since inside trading is normally triggered by unusual events in the life of a corporation,[93] events that may never reoccur, the potential inside trader is unlikely to view an injunction as ever restricting his activities.

The threat of an injunction might serve as an effective counter-motivation for members of the financial and investment communities who engage in benefit-generating, inside trading violative of rule 10b-5, but even among such offenders it is rarely an appropriate one. When interpreted as a felony or misdemeanor conviction under 15 U.S.C. § 80a-9(a)(1), an injunction serves to prohibit the offender's association with any investment company, investment adviser, or investment bank for ten years[94] unless the offender receives an exemption from the SEC.[95] Since the injunction, when so interpreted and when no exemption is granted, is a very substantial penalty, it should be reserved for offenders who commit flagrant violations and receive great benefits or for offenders who show a pattern of continuous violation.

Fortunately, the SEC has been able to apply or have the courts apply penalties that have a sufficient relation to the offender's benefits. A combination of injunctive relief and the regurgitation of the offender's profits (or some approximation thereof) can successfully offset the benefits of offending,[96] much as under 16(b). In cases involving broker-dealers, investment advisers, and affiliates of investment companies, penalties may take the form of injunctions coupled with either registration suspensions or temporary prohibitions of association with any broker-dealer, investment company, investment ad-

93. These include mergers, tender offers, ore discoveries, or the creation of new products. *See, e.g.*, SEC v. Texas Gulf Sulphur Co., 401 F.2d 833, 843-44 (2d Cir.), *cert. denied*, 394 U.S. 976 (1968).

94. 15 U.S.C. § 80a-9(a)(1) (1970). Many insiders who are associated with these members of the financial community will consent to injunctions that specifically state there is to be no inference of wrongdoing in order to avoid having been "convicted." *See, e.g.*, Wall St. J., June 4, 1973, at 3, col. 1 (eastern ed.).

95. 15 U.S.C. § 80a-9(c) (1970). *See, e.g.*, Wall St. J., April 30, 1973, p. 8, col. 2 (eastern ed.) (temporary exemption granted).

96. *See, e.g.*, SEC v. Texas Gulf Sulphur Co., 446 F.2d 1301, 1306-07 (2d Cir.), *cert. denied*, 404 U.S. 1005 (1971) (injunctions issued; insider defendants paid their profits into escrow fund for possible payment to investors); Wall St. J., Oct. 9, 1972, at 4, col. 4 (eastern ed.) (two defendants ordered to disgorge profits of $28,000 and $14,950; permanent injunctions against future violations issued).

viser, etc.[97] Such penalties doubtless result in financial losses for those upon whom they are imposed. If the length of the suspension and the consequent financial loss actually bear some relationship to the offender's benefits, these penalties may be sufficient counter-motivations without any regurgitation of profits to persons who may not actually have sustained a loss as a result of the offense. Typically, however, suspensions are for twenty, thirty, sixty, or ninety days,[98] which suggests that they are set with little if any regard to the offender's financial gain. A suspension for a period of time calculated to offset the offender's gain through lost salary or lost business profits would be more effective in terms of primary general deterrence and would require virtually no additional enforcement resource expenditures.

Enforcement of rule 10b-5 is conducted by private individuals as well as by the SEC. The penalties resulting from private enforcement, however, also frequently bear little relation to the offender's benefit and thus show little concern for effective, efficient prevention. Many of the penalties are related more to the plaintiff's loss than to the defendant's gain, which may be desirable in terms of redressing legitimate injuries but which is inefficient in terms of primary general deterrence. If the suit takes the form of a derivative action with the damage recovery going to the corporation whose stock has been traded, a penalty equal to the offender's profits is appropriate.[99] However, suits are also brought by investors demanding lost opportunity damages equal to the gains they might have made by trading in a market in which the inside information was widely known.[100] The recovery in such suits could be huge and could bear no relationship to the offender's financial gains.[101] For prevention purposes, these huge penalties are likely to be no more effective than penalties that simply offset the offender's benefits (assuming that all offenders are

97. *See* 15 U.S.C.A. § 78o-3(h) (Supp. 1976); 15 U.S.C. § 80a-9(b)(2) (1970); 15 U.S.C.A. § 80b-3(e) (Supp. 1976).

98. *See, e.g.*, Cady, Roberts & Co., 40 S.E.C. 907 (1961) (20 days); N.Y. Times, June 2, 1973, at 38, col. 5 (late city ed.) (20 days); Wall St. J., June 4, 1973, at 3, col. 1 (eastern ed.) (60 days).

99. Some approximation of profits is obviously also appropriate. *See, e.g.*, Wall St. J., May 14, 1974, at 21, col. 1 (eastern ed.).

100. *See, e.g.*, Mitchell v. Texas Gulf Sulphur Co., 446 F.2d 90 (10th Cir.), *cert. denied*, 404 U.S. 1004 (1971). In this case, the investors who had sold after a misleading disclosure lost the opportunity for substantial profits when the market skyrocketed after a complete disclosure. The court awarded them the gain in stock value they might have relized in the first few days. 446 F.2d at 105. Any investor who traded in the market while the insiders were trading may be able to claim this remedy. *See* Ruder, *Corporate Disclosures Required by the Federal Securities Laws: The Codification Implications of Texas Gulf Sulphur*, 61 NW. U. L. REV. 872, 894 (1967).

101. Of course, if the remedy were equivalent to benefits, each investor might receive only a fraction of a cent for each share he traded. *See generally* 2 A. BROMBERG, SECURITIES LAW § 7.6(e) (1974).

penalized),[102] while the prospect of such damages serves as an incentive to much litigation at substantial social costs.[103]

There are two additional aspects to the problem of setting penalties so that they offset the offender's benefit from offending. The first deals with selection of the minimum penalty that should be demanded by the SEC in the settlement of an enforcement action. Decreasing the penalty in settlements decreases the efficacy of prevention since some individuals might, as a result, conclude that they will retain some of their benefits from offending even if they are detected. Against this decline in preventive efficacy, however, must be weighed the preventive value of detecting and prosecuting other offenders with the resources freed by settling some cases prior to any lengthy hearings. Obviously, the final penalty settled upon is a matter of negotiation and will vary among individual cases. However, the SEC, in an attempt to settle, should lower penalties only to the point where the decrease in preventive efficacy caused by the decrease in the severity of the penalty is roughly offset by the gain in preventive influence from employing freed enforcement resources to increase the probability that some enforcement will occur. It is not clear whether this balancing is presently being done by the SEC.[104]

The other aspect to the problem of setting penalties deals with the increased purchase by insiders of insurance policies that pay both legal fees and damage awards if the holder is found to have violated rule 10b-5.[105] These policies may be purchased by corporations for their executives. If such purchases of insurance are allowed, the deterrent value of two counter-motivations—primary general deterrence and, in the form of legal fees, secondary general deterrence—will be nullified.[106] An investment of SEC resources to effect the

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102. That these huge penalties are likely to be superfluous is shown here. It has been shown that

$$\pi = F_b \cdot B - [F_{pp} \cdot P]$$

Even if these penalties are only three times the benefits, *i.e.*, $P = 3B$, and even if the perceived probability of punishment, F_{pp}, is only one half the probability of benefit, *i.e.*, $\frac{F_b}{2}$, the effects of primary general deterrence will be superfluous, without even considering the other preventive influences:

$$\pi = F_B \cdot B - \frac{F_b}{2} \cdot (3B)$$

$$\pi = F_B \cdot B - 3/2\ (F_b \cdot B)$$

$$\pi = F_B \cdot B\ [1 - 3/2]$$

$$\pi = -1/2\ (F_b \cdot B)$$

103. *See* Note, *supra* note 63, at 939.

104. *See, e.g.*, N.Y. Times, June 2, 1973, at 38, col. 5 (late city ed.); *id.*, Nov. 10, 1972, at 53, col. 1 (late city ed.); Wall St. J., May 14, 1974, at 21, col. 1 (eastern ed.); *id.*, June 4, 1973, at 3, col. 1 (eastern ed.). Although exact measurements cannot, of course, be made, some effort at analytical judgments should be attempted.

105. *See* Wall St. J., Aug. 29, 1968, at 1, col. 1 (eastern ed.).

106. It is not clear whether insurance and indemnification by the corporation is

passage of legislation prohibiting indemnification and insurance, at least with respect to damage awards, would therefore be worthwhile.

Even apart from the penalty problems, primary general deterrence in the 10b-5 context is frustrated by the great difficulty of maintaining the probability of detection and, to a lesser degree, the probability of enforcement at high or even minimally adequate levels. While this difficulty is inherent in the secretive nature and ill-defined reach of the offense, there are, as discussed below, resource allocations and reallocations society can make that would ameliorate the problem.

It is extremely difficult in the 10b-5 context to induce in potential offenders any substantial expectation of detection. Insider trading is very hard to notice unless conducted on a large scale since market traders are willing to become unknowing victims. Consequently, constant vigilance and investigation is necessary just to know that a prohibited trade has occurred, let alone to determine the identity of the insider. The probability of detection under rule 10b-5 is apparently much lower than under 16(b), where the detection problem was virtually removed by the reporting requirements of section 16(a).[107] Since no regulation or reporting form automatically brings violations to public attention, those enforcing 10b-5 must rely on the natural workings of the market. When insiders are trading a particular stock in any significant volume, the market price of the stock rises or falls. Accordingly, any market movement that precedes the announcement of some particular corporate occurrence creates grounds for investigation of possible insider trading. The SEC regularly depends upon these triggering events.[108] But, in the case of large corporations with many shareholders, insider trading volume might not be heavy enough to cause detectable market movement. Thus, the SEC might not perceive that investigation was necessary.

Discovery of the specific identity of the inside traders is an additional task even when the offending activity has been clearly

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legal. *See* Bishop, *New Problems in Indemnifying and Insuring Directors: Protection Against Liability Under the Federal Securities Laws*, 1972 DUKE L.J. 1153, 1157-58; Comment, *Insider Indemnification and the Supremacy Clause: The Three Faces of Fraud*, 63 Nw. U. L. REV. 523, 543 (1968); Comment, *Insuring Corporate Executives Against Liability Under 10b-5: First Principles and Second Thoughts*, 63 Nw. U. L. REV. 544, 563 (1968).

107. *See* note 83 *supra* and accompanying text.

108. *See, e.g.*, Wall St. J., Jan. 11, 1973, at 10, col. 3 (eastern ed.) (36 per cent drop in stock prices in two days followed by the disclosure of disappointing quarter); *id.*, Oct. 24, 1972, at 4, col. 3 (eastern ed.) (drop in prices before a release disclosing drop in earnings); *id.*, Aug. 15, 1972, at 3, col. 2 (eastern ed.); *id.*, Jan. 24, 1972, at 5, col. 1 (eastern ed.) (stock price jumped from $7 to $26 followed by disclosure of merger plans). *Cf.* 72 FORTUNE 69, 70 (1965) (two contradictory press releases triggered Texas Gulf Sulphur investigation). *See generally* Ferrara, *SEC Division of Trading and Markets: Detection Investigation and Enforcement of Selected Practices That Impair Investor Confidence in the Capital Markets*, 16 How. L.J. 950, 980-81 (1971).

detected. The section 16(a) reporting forms can be helpful in detecting trades violative of 10b-5 by those insiders required to complete the forms, and new computerization methods may soon permit the SEC to obtain information on trades by insiders on the very day that they are made.[109] However, there are still substantial possibilities for evading detection through the use of "street names" and secret accounts.[110] The SEC is now trying to increase the probability of detection by implementing new enforcement policy recommendations.[111] Efforts are also being made to conscript professionals associated with corporations and the financial world, such as lawyers and accountants, to serve as unofficial investigators under fear of sanctions.[112] Unfortunately, however, the objective probability of detection in the 10b-5 setting is still low.

It has been less difficult to maintain a reasonably high probability that 10b-5 violations, once detected, will be followed by successful enforcement efforts. Enforcement mechanisms under 10b-5 are less automatic than under 16(b);[113] thus, the probability of enforcement of 10b-5 violations does not approach one. Yet, a significant probability of enforcement (F_{oe}) has been developed through the creation of incentives for private enforcement and through the enlargement of the class of potential enforcers.

Two occurrences expanded the resource base available for enforcement of 10b-5 violations. One was the judicial inference of a private right of action under 10b-5,[114] which allowed private traders to supplement SEC enforcement efforts and increased the probability that *someone*, the SEC or an investor, would bring an enforcement action following the discovery of a violation.[115] The other was the abandonment of the privity requirement.[116] Privity in securities transactions had tended to be very difficult to establish, particularly when sales on national exchanges were involved. The abandonment of the requirement therefore drastically increased the possible plaintiff class in a given situation by including any investor trading on the market in the same stock and at the same time that the offender was trading. This change, combined with the move toward less stringent

109. N.Y. Times, Oct. 4, 1972, at 63, col. 5 (late city ed.).

110. *See* H. MANNE, *supra* note 45, at 163.

111. *See* SEC, ADVISORY COMM. ON ENFORCEMENT POLICIES AND PRACTICES, REPORT (1972).

112. *See* Lipman, *The SEC's Reluctant Police Force: A New Role for Lawyers*, 49 N.Y.U. L. REV. 437 (1974); Wall St. J., July 12, 1974, at 1, col. 6 (eastern ed.). Some of these professionals are responding. *See id.* June 28, 1974, at 8, col. 1 (eastern ed.).

113. *See* text at notes 83-84 *supra.*

114. *See* 1 A. BROMBERG, *supra* note 101, § 2.4(1), at 27 & n.47 (1974).

115. *See* J.I. Case Co. v. Borak, 377 U.S. 426, 432 (1964).

116. *See* 2 A. BROMBERG, *supra* note 101, § 8.5(511), at 207; 1 *id.* § 2.5(3), at 43.

reliance requirements,[117] has enabled plaintiffs to join together in class action suits and thereby overcome resource barriers to bringing enforcement actions.

Along with recognizing a broader class of enforcement agents, the law under 10b-5 developed in a manner that implicitly provided incentives for individuals to bring private causes of action. Problems of proof, which had always been difficult in insider trading cases,[118] were eased.[119] This relaxation created a greater likelihood that a plaintiff would win an enforcement action and thus that he would be induced to bring it initially. Moreover, courts began to allow substantial damage recoveries and some attorney fees,[120] which made the investment of time and resources by the plaintiff and his counsel far more attractive. As a result of these developments, it is today very likely that some action will be taken, by the SEC or an investor, once a violation is detected.

Thus, the objective probabilities of detection and enforcement in the 10b-5 area operate like an inverted funnel. Many cases never enter the funnel because of the narrow neck created by the low probability of detection. For those cases that enter the funnel, however, the probability of enforcement is substantial; thus, the funnel widens. It is significant that this relatively high probability of enforcement is apt to remain high even if the probability of detection increases and more offenders enter the enforcement process. In the normal case involving a fixed amount of resources at the enforcement stage, an increase in the probability of detection triggers a decrease in the probability of enforcement since resources are unavailable to bring actions against the additional offenders. In the 10b-5 context, the prospect of liberal damage recoveries and the substantial class of potential plaintiffs together create a readily available and expanding pool of enforcement resources and ensure a continued high probability of enforcement.

Thus, increased prevention efficacy under rule 10b-5 is dependent upon an increase in the probability of detection. Society could solve the problem by devoting more resources to the detection of 10b-5 violators. Alternatively and probably less costly, however, society could increase the communication factor, k, and thereby increase the probability as *perceived* by potential offenders. Members of the business and financial communities spend much of their time absorbing information and are relatively susceptible to media messages.[121]

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117. *See* note 65 *supra*; 2 A. BROMBERG, *supra* note 101, § 8.6, at 209. Reliance is implied in many cases through a finding of materiality. *See* Affiliated Ute Citizens v. United States, 406 U.S. 128 (1972).

118. *See, e.g.*, Smolowe v. Delendo, 136 F.2d 231, 235 (2d Cir. 1943).

119. *See* 1 A. BROMBERG, *supra* note 101, § 2.5(4), at 44.2.

120. *See id.* §§ 11.7, 913 (1968).

121. "In an institution as naturally jittery as the stock market, publicity can be

This characteristic of potential 10b-5 offenders suggests the possibility of raising the perceived probabilities of detection and enforcement above the objective ones.

A well-developed business media exists to facilitate direct communication to potentially all inside traders in the business and financial communities. Members of these communities depend heavily upon data and information concerning businesses, markets, and trends and can be expected to read the appropriate newspapers and magazines with care. This factor distinguishes insider trading from many prohibited acts where no consistent exposure to the media necessarily exists. Furthermore, members of the business and financial communities often read more than one of the several business newspapers and periodicals. Since a single news story or announcement is often carried by most of the publications, a potential inside trader may have multiple exposure to the fact that a particular enforcement has occurred.[122] In short, the communication system to potential inside traders is well developed and needs no additional investment of resources. By using this excellent system of communication in a consistent and effective manner, the SEC can and apparently has created the appearance of a higher probability of detection than actually exists. The SEC's announcement of large numbers of investigations and actions has led to the superstition that SEC investigators lurk everywhere.[123] These publications have been particularly effective with respect to Wall Street broker-dealers, but corporate insiders too are faced with headlines reading "SEC watchmen prowl a new beat"[124] or "New blast on inside information."[125]

Thus, the SEC has to date made reasonably good use of the communication system. To increase the perceived probability of detection it should augment its communication efforts in that area. The one caveat is that the SEC should exercise caution in publicizing unsuccessful enforcement actions and actions resulting in virtually

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a very potent weapon. This week, the Securities & Exchange Commission moved against stock tips in the most sensational way possible when it charged Merrill Lynch. . . ." BUS. WEEK, Aug. 31, 1968, at 19.

122. *See, e.g.*, N.Y. Times, Aug. 15, 1972, at 46, col. 4 (late city ed.); Wall St. J., Aug. 15, 1972, at 3, col. 2 (eastern ed.).

123. Scarcely a day passes but that the SEC publishes the details of the revocation of a broker-dealer registration.

> The cumulative effect of these actions—accentuated by the widespread publicity they received—has created an atmosphere in Wall Street that contains an element of fear. By its constant bustle of activity, the Commission has managed to nurture the Wall Street superstititon that there is an SEC investigator lurking around every corner.

Phalon, *The SEC vs. Wall Street*, 81 DUN'S REV. & MODERN INDUS. 56, 57 (1963). Analysts, executives, and investors broke all sales records in purchasing Record Press reprints of the *SEC v. Texas Gulf Sulphur Co.* court of appeals opinion. Wall St. J., Aug. 19, 1968, at 5, col. 3 (eastern ed.); Note, *supra* note 63, at 860.

124. BUS. WEEK, May 7, 1966, at 53.

125. BUS. WEEK, Aug. 31, 1968, at 19.

meaningless penalties, for such actions have ambiguous effects on the perceived probabilities of enforcement.[126]

With regard to primary general deterrence in the 10b-5 context, then, major efforts are needed to raise the probability of detection, to design better and more consistent penalties, and to communicate carefully and forcefully. The first area of effort will require significant new allocations of resources, but, since a low probability of detection serves as a bottleneck to returns on the use of other enforcement resources,[127] such expenditures are important. Careful communication directed at the perceived probability of detection may be capable of inducing a portion of the needed increase. The other two points of needed attention suggest solutions involving more of a qualitative change in the use of resources than massive additional resource input.

D. *Socio-Pedagogical Influence and Insider Trading*

The efficacy of socio-pedagogical influences in the prevention of insider trading is an area needing serious attention. Socio-pedagogical influences have been slow to develop and are still of limited effectiveness, largely due both to society's failure to invest in the necessary underlying norms years ago and to the uncertainty that has surrounded the definition of prohibited insider trading.

In the insider trading context, socio-pedagogical influences and the underlying norms are weak due to the inherent difficulty of developing such norms, in the business community as well as in the general public, for economic legislation and business regulation. This difficulty is in turn due to the fact that the undesirability of activities covered by economic legislation, including insider trading, stems not from its immorality but rather from its unfairness—like playing poker with a marked deck. Unfairness does not develop feelings of

126. On the one hand, startling enforcements such as Shapiro v. Merrill Lynch, Pierce, Fenner & Smith, Inc., 495 F.2d 228 (2d Cir. 1974), may have a preventive influence whether or not the SEC prevails: "Regardless of the outcome of the [Merrill Lynch] case, the fact that the action was taken has served notice on Wall Street that the SEC is not going to tolerate the misuse of inside information to the detriment of the small investor. There are indications that the practice already has been drastically curtailed, which means the little guy already is benefiting." Robards, *Texas Gulf Sulphur, Merrill Lynch and All That*, 123 MAGAZINE OF WALL ST. Dec. 7, 1968, at 29, 40. But many SEC enforcements do not result in real penalties. *See, e.g.*, Wall St. J., June 11, 1974, at 2, col. 2 (eastern ed.) (censures); *id.*, June 5, 1973, at 2, col. 2 (eastern ed.); *id.*, May 29, 1973, at 10, col. 3 (eastern ed.) (consent decrees). These "nonenforcements" might actually lower the perceived probability of enforcement. For prevention purposes, the use of resources to investigate and begin an action under these circumstances is wasted and highly inefficient. Of course, there may be other policies that in a particular case would call for lenient treatment. But the regular occurrence of meaningless penalties belies this justification, particularly when couched vaguely in terms of the public interest.

127. *See* text at note 42 *supra*.

"wrongness"—norms—as successfully as do overtones of immorality. The difficulty is compounded in the insider trading context because there is no agreement that insider trading is even unfair or harmful to market integrity. Henry Manne, for example, in his book *Insider Trading and the Stock Market*, argues that insider trading is a facilitator of more efficient markets and hence should not be prohibited.[128] The SEC seems to picture the prevention of insider trading as essentially an effort to protect the sanctity of the market—a purpose less conducive to norm development than a purpose framed in terms of the protection of personal property. Clearly, this barrier to norm development could be mitigated by developing the view that insider trading is very much like theft, a view gaining support in Great Britain.[129]

There is little empirical proof that socio-pedagogical influences can be developed. However, it is theoretically possible to develop such influences,[130] and there is evidence that some influences presently exist for insider trading[131]—an activity that was perfectly legal forty-one years ago. In a survey conducted by *The Annalist* in 1915, all but a few of the corporate directors questioned felt that the use of inside information for personal profit was perfectly acceptable. One surveyed individual estimated that ninety per cent of all businessmen at that time perceived insider trading as ethically sound.[132] It is not clear how drastically this view has changed. In 1961, only forty to sixty per cent of the business executives who were asked a series of questions concerning their ethical beliefs said that they were willing to trade on inside information.[133] While it seems likely that this trend toward greater disapproval among businessmen has continued,[134] the over-all change is not tremendous. Yet the present weakness of socio-pedagogical norms and the lack of concrete evidence that they are easily developed does not necessarily counsel against the allocation of more resources to their development: Few resources have been invested to date to develop even the present weak norms, and changes may not require substantially greater resource outlays. Fur-

128. H. MANNE, *supra* note 45.

129. Although insider trading is legal in Great Britain, it has been referred to as "legalized larceny." *See* Wall St. J., Oct. 6, 1975, at 1, col. 6 (eastern ed.).

130. *See* E. SUTHERLAND, *supra* note 34, at 59; Ball & Friedman, *The Use of Criminal Sanctions in the Enforcement of Economic Legislation: A Sociological View*, 17 STAN. L. REV. 197, 220 (1964).

131. *See* Hetherington, *Insider Trading and the Logic of the Law*, 1967 WIS. L. REV. 720, 733.

132. *See* THE ANNALIST, July 19, 1915, at 65. In his narrative of nineteenth-century Wall Street, Henry Clews speaks in almost glowing terms of insiders who sold their companies' stock on the basis of nonpublic information and criticizes not the insiders, but the public who did not wait for further information. H. CLEWS, TWENTY-EIGHT YEARS IN WALL STREET 202-03 (1888). *See also* F. PECORA, WALL STREET UNDER OATH 152-61 (1939).

133. Baumhart, *supra* note 70, at 16.

134. *See generally* Hetherington, *supra* note 131, at 735-36.

thermore, norms developed in an effort to engender socio-pedagogical influences will indirectly yield substantial benefits in the form of secondary general deterrence.[135]

Early regulation of insider trading under 10b-5 and 16(b) did not employ resources in a manner most conducive to the development of socio-pedagogical influences or the necessary underlying norms. The statutory prohibitions either covered only some instances of abuse of inside information or were characterized by uncertain dimensions. Consequently, the socio-pedagogical message, M, was incomplete, uncertain, and uninfluential, and the growth of the necessary norms was stunted.

A comprehensive definition of the prohibited activity was never clearly stated in the case of insider trading but was instead allowed to develop haltingly over time. Until 1947, only those abusive uses of inside information within section 16(b) even appeared to be prohibited. In that year, rule 10b-5 was interpreted in *Kardon v. National Gypsum Co.*[136] to apply to insider trading, but its reach was limited to a narrow range of insider transactions—those in which one party in a face-to-face transaction failed to disclose important information affecting the value of the stock.[137] Because insider trading was never unequivocally branded as a prohibited activity during this early period, and because the extent of the prohibition was never clearly stated, the rankings R_e and R_p, which served as the content of the socio-pedagogical message, were very low. While vigorous enforcement efforts and significant penalties were the order for the short-swing type of insider trading, other abuses of inside information were left untouched. As a consequence, the average penalty and enforcement levels for insider trading as a whole[138] were low: The high levels under 16(b) were averaged with zero levels for other abuses of inside information. Thus, society actually conveyed the message during this earlier period that it did not view insider trading as particularly undesirable.

Even the vigorous enforcement efforts and consistently designed and applied penalties under 16(b) were not as conducive to the development of norms during this period as they might have been. Section 16(b) was limited to sales and purchases within a six-month period, required *both* a purchase and a sale, and, thus, was based on an arbitrary rule that did not distinguish between wrongdoing and totally innocent exchanges. Such a detailed statutory structure failed to convey any strong feelings of "wrongness" since the activities it prohibited were little different from some of the activities it did not

135. *See* text at notes 123-54 *infra.*
136. 83 F. Supp. 613 (E.D. Pa.).
137. 83 F. Supp. at 614.
138. *See* note 35 *supra* & accompanying text.

prohibit. Clearly, a much stronger message would have been generated had the 16(b) scheme separated the wrongdoing from the innocent activities.[139]

In the last decade, much has been done to strengthen the socio-pedagogical message. The reach of rule 10b-5 has been extended so that virtually all wrongful insider trading is prohibited. Dramatic and highly publicized enforcements, such as *Texas Gulf Sulphur*[140] and *Merrill Lynch*,[141] and an increase in the number of litigated cases of insider trading have presumably caused an increase in the R_o factor communicated to the public, while large judgments for plaintiffs have presumably increased R_p. If this message is maintained over a significant period of time, socio-pedagogical influences associated with insider trading should gradually increase. Yet, one impediment to the maximization of socio-pedagogical influences remains —the substantial uncertainty that still surrounds the reach of rule 10b-5.[142] Judicial opinions that increase the clarity of rule 10b-5 will doubtless contribute to the development of socio-pedagogical influences. A better means of reducing the uncertainty would be to codify the last forty years of legal developments into a new statutory scheme of regulation for insider trading.[143] Such a scheme would probably not require the expenditure of additional enforcement resources.

Several lessons can be learned from this experience with the development of socio-pedagogical influences in the area of insider trading. One is the desirability of avoiding statutes like 16(b) that lump together innocent and wrongful activity and that prohibit some but not all wrongful activity of a particular type. A second lesson is

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139. This conclusion suggests that the general conceptual formulation for the socio-pedagogical message, $M = k(R_o + R_p)$, must be modified in specific models to take account of enforcement resource allocations or penalties that are not capable of conveying "wrongness." This alteration could be made by discounting or lowering the rankings.

140. SEC v. Texas Gulf Sulphur Co., 401 F.2d 833 (2d Cir.), *cert. denied*, 394 U.S. 976 (1968).

141. Shapiro v. Merrill Lynch, Pierce, Fenner & Smith, Inc., 495 F.2d 228 (2d Cir. 1974).

142. *See* W. PAINTER, *supra* note 47, at 394-95.

143. The American Law Institute has attempted such a codification. *See* FEDERAL SECURITIES CODE §§ 1303, 1402, 1413 (Tent. Draft No. 2, March 1973). One commentator has stated:

> The question is simple: Insider trading must be regulated. The only problem is how. It is now being done in polyglot fashion through disciplinary and, more recently, restitutional proceedings, accompanied by judicial development of an entire common law of Rule 10b-5 governing the rights of private litigants. But we have reached a point where corporate officials, shareholders and potential investors, insiders and outsiders alike, are entitled to more explicit language in the statute, the only ultimate reflection of the democratic process of representative government. This does not rule out the possibility, even the desirability, of further rule-making powers being given to the Commission to elaborate the statutory intent.

W. PAINTER, *supra* note 47, at 394-95 (footnotes omitted).

that vague prohibitions like 10b-5 are less efficient generators of socio-pedagogical influences than more certain statutes of similar breadth. Socio-pedagogical influences are developed essentially by the resources expended on primary general deterrence. In allocating these resources, first priority should be given to maximizing primary general deterrence since that element of prevention is most influential.[144] Agencies should, however, consider socio-pedagogical influences in making allocation decisions, and they should avoid devising statutory and enforcement schemes that frustrate the development of such influences.

E. *Secondary General Deterrence and Insider Trading*

Much of the above discussion concerning inadequate norm investment is applicable also to secondary general deterrence, for the norms that must be developed to trigger socio-pedagogical influences also serve as the basis for secondary general deterrence. The strength and consistency of norms necessary to support socio-pedagogical influences, however, may be substantially greater than that required to induce individuals to impose secondary costs.

Strong norms are required to prevent or help prevent an individual from engaging in some activity that he expects will benefit him personally. Weaker norms, however, may be adequate to induce the general public to shun an individual, to refuse to employ him, or to doubt his reputation for honesty and integrity. To induce these secondary costs, norms need not overcome strong motivations of self-interest; indeed, compliance with the norms may be synonymous with self-interest. For example, a businessman who personally views an activity as only somewhat reprehensible may nevertheless dismiss individuals under investigation or involved in litigation over this prohibited activity in order to avoid any public appearance of impropriety among his employees.[145] Moreover, the failure to invest in norms cannot diminish the effectiveness of those secondary costs that are not imposed directly by other individuals. Attorney fees[146] and lost income while involved in litigation or investigations will be incurred by a violator even if other members of the community view his action as proper.

Both substantial automatic secondary costs in the form of attorney fees[147] and a low threshold of norm strength necessary to support the

144. *See* text at note 71 *supra*.

145. *See generally* Baumhart, *supra* note 70, at 10.

146. The effectiveness of this secondary cost is impaired by any practice of allowing potential offenders to take out insurance policies that indemnify for attorney fees. *See* note 106 *supra* and accompanying text.

147. Expectation of substantial attorney fees are extremely disconcerting and can also induce settlements of SEC suits. *See, e.g.*, Wall St. J., Jan 28. 1972, at 17, col. 1 (eastern ed.).

creation of secondary counter-motivations have apparently made secondary general deterrence a viable and growing prevention force for insider trading. Yet, the continued development of this element of prevention will require effort and planning. Other than attorney fees and expenditures of time and effort, secondary costs seem to take the form of fears of job dismissals,[148] ruined careers,[149] and general harm to reputations.[150] Potential offenders will expect these costs only if those in positions to impose them agree with the spirit of the law. In the general model, it was implicitly assumed that there existed individuals with the desired norms standing ready to impose these secondary costs on violators or alleged violators—that is, that the imposition of secondary costs depended only upon F_{od}. This assumption—that simply detecting a violation will result in the imposition of secondary costs—must be altered in the context of insider trading.

Presumably, the potential inside trader today expects to incur significant secondary costs only if his superiors and fellow executives agree with the spirit of the prohibition or if he is associated with a company or industry that is subject to public pressure and is concerned about its business image.[151] In applying the general model to insider trading, therefore, it is necessary to change the $(F_{od} + F_{oe}) \cdot S$ formula for secondary counter-motivations to $(F_{od} + F_{oe})(F_t) \cdot S$ where F_t represents the probability that a potential violator associates with individuals who will impose secondary costs.

If an inside trader does associate with individuals who are prepared to impose secondary costs, mere detection or investigation (F_{od}) of his violation is apt to trigger those costs.[152] Thus, a

148. *See, e.g.*, N.Y. Times, Jan. 26, 1972, at 43, col. 4 (late city ed.) (individual charged in suit for insider trading resigned); *id.*, Dec. 14, 1972, at 73, col. 1 (late city ed.) (Oppenheimer analyst immediately discharged for selectively disseminating a report); *id.*, April 23, 1965, at 1, col. 6 (late city ed.) (Commerce Department aide resigned after buying Texas Gulf Sulphur stock on a tip); Wall St. J., April 20, 1973, at 1, col. 6 (eastern ed.) (Equity Funding personnel forced to resign).

149. *See, e.g.*, N.Y. Times, Jan. 11, 1972, at 49, col. 4 (late city ed.) (individual claimed his career was ruined as the first person convicted under a 30-year-old statute prohibiting insider dealing in mutual funds).

150. *See, e.g.*, N.Y. Times, Aug. 15, 1972, at 47, col. 5 (late city ed.) (former financial vice-president of Penn Central feared his silence would be interpreted as guilt by friends and former associates); *id.*, Jan. 5, 1972, at 50, col. 3 (late city ed.) (security analysts group was concerned that splinter groups would violate insider trading rules and that these violations would be attributed to their group); Wall St. J., June 1, 1973, at 2, col. 4 (eastern ed.) (bank feared any settlement that would imply wrongdoing); ENFORCEMENT REPORT, *supra* note 111, at 45.

151. *See* Symposium, *White-Collar Crime*, 11 AM. CRIM. L. REV. 817, 825 (1973).

152. *See, e.g.*, Wall St. J., Sept. 25, 1974, at 1, 28, col. 3 (eastern ed.):

> Even though such activities haven't been alleged on Mr. Langfields' part and charges haven't been brought, the SEC investigation already has cost Mr. Langfield dearly. He had earned a $25,000-a-year salary at IDS; now he is collecting unemployment compensation and worrying about supporting his wife and five children while paying mounting legal fees. His cabin cruiser, a relic of flusher times, has been sold. "I'm really nervous about the future," he says, "be-

potential inside trader cannot reasonably expect to avoid secondary costs by conducting a good court battle or negotiating a consent decree. Since secondary costs are influential for the typical potential inside trader,[153] the fact that they are so easily triggered further enhances their prevention efficacy.

Positive levels of secondary general deterrence, then, depend most heavily both upon past norm development and upon the level of resources devoted to the communication of violations. As discussed above, the communication system in the area of insider trading does not lack development, but only careful use.[154] The need for further investment in norm development is identical to the need set forth in the discussion of socio-pedagogical influences except that a lesser degree of development may suffice to support secondary general deterrence alone.

F. *Conclusion*

This Note has suggested several changes in the allocation of resources to the prevention of insider trading, each of which would affect one or more of the basic elements of prevention. First, resources should be expended to increase the probability of detection. This change would most directly affect primary general deterrence but is also an important triggering mechanism for secondary general deterrence and a part of the message necessary to develop the norms basic to secondary general deterrence and socio-pedagogical influences. Second, penalties should be redesigned so that they more accurately offset the offender's benefits. This change would improve primary general deterrence. Third, communication should be used more carefully to increase the prevention efficacy of all three elements. Finally, a statutory scheme should be designed that would use already committed resources more efficiently in communicating messages for norm development and would thus influence both socio-pedagogical influences and secondary general deterrence.

These reallocations should not be made, of course, unless the net marginal benefit of a change is greater than or equal to zero, and they certainly should not be made if the cost of prevention would then exceed K*, the social harm associated with no prevention. Such determinations require the exercise of judgment since exact measure-

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cause trading is the only thing I know how to do, and these days I'm a leper to the securities industry."

Mr. Langfield spends his time job hunting and writing poetry. He talks about possibly starting a fast-food franchise or an ice-cream store. Last month, to pick up some spare quarters, he bought five electronic game machines and installed them in Minneapolis-area restaurants.

See sources cited in notes 148, 150 *supra*; ENFORCEMENT REPORT, *supra* note 111, at 18.

153. *See* text at note 73 *supra.*

154. *See* text at notes 121-25 *supra.*

ments are impossible. But it would seem that these changes should be made. Only the recommended increase in the probability of detection requires substantial new resource expenditure; the other changes are essentially qualitative improvements in the use of currently committed resources. Because each change is likely to have multiple points of benefit, and because the bottleneck in detection is presently decreasing the return on resources already committed to other steps in the enforcement process, the benefits from the changes are very likely to outweigh the costs.